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Missouri State Employees' Retirement System



**COMPONENT UNIT FINANCIAL REPORT**  
**Fiscal Year Ended June 30, 1991**



# **Missouri State Employees' Retirement System**

## **Component Unit Financial Report Fiscal Year Ended June 30, 1991**

M. Steve Yoakum,  
Executive Director

Gary Irwin,  
Chief Accountant

Missouri State Employees' Retirement System  
906 Leslie Boulevard  
P.O. Box 209  
Jefferson City, Missouri 65102  
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Photos courtesy of  
The Missouri Department of Conservation,  
The Missouri Division of Tourism and  
The Missouri Highway and Transportation Department

# Introductory Section

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## Letter of Transmittal



### **MISSOURI STATE EMPLOYEES' RETIREMENT SYSTEM**

906 LESLIE BOULEVARD  
JEFFERSON CITY, MISSOURI 65101

Telephone: 314-751-2342

MAILING ADDRESS  
P.O. Box 209  
Jefferson City, Missouri 65102

M. Steve Yoakum  
Executive Director

Rosemary Eppenauer  
Assistant Executive Director

Ron Meyer  
Assistant Executive Director

September 1, 1991

The Board of Trustees  
Missouri State Employees' Retirement System  
Jefferson City, MO 65101

It is with great pleasure that I submit the annual report of the Missouri State Employees' Retirement System (MOSERS) for the fiscal year ended June 30, 1991. MOSERS is considered a component unit of the State of Missouri for financial reporting purposes and, as such, the financial reports contained in this report are also included in the State of Missouri Comprehensive Annual Financial Report. The financial information presented in this report is the responsibility of the management of MOSERS and the report is designed to comply with the provisions of Sections 104.480 and 105.661 of the Revised Statutes of Missouri (RSMo) as amended. For ease of use, the report has been divided into the following four sections. The Introductory Section contains general information regarding the operations of MOSERS. The Financial Section contains the financial reports and schedules of the funds administered by MOSERS. The Actuarial Section contains actuarial information regarding the funding of the pension trusts. The Statistical Section contains statistical data pertaining to the benefits paid by MOSERS and the investments of the system.

The environment in which MOSERS operates experienced several significant events during the year. The investments of the system were impacted by a general stock market loss early in the fiscal year due to the uncertainties in the Middle East with the invasion of Kuwait by Iraq and the entry of the United States' military forces in the conflict. The markets have since recovered back to pre-gulf war levels but the DOW has remained hovering at the 3000 level mainly due to the uncertainties in the U.S. economy and events in eastern Europe and the Soviet Union. Interest rates continued to decline through the year, which helped to bolster the values of MOSERS longer



term fixed income investments. The Medical Care Plan inflation factor as used by the consultant to project future claims was reduced from 21% to 18% reflecting the overall claims experience of the Plan as well as cost savings initiatives instituted during the year. The Medical Care Plan, however, continued to incur more expenses than receipts, which resulted in a net decrease of \$6,706,599 to the fund balance.

MOSERS continually reevaluates its policy and procedures in light of the dynamic environment in which we operate. The Board of Trustees is currently in the process of reevaluating the investment policies of the system and, as a result, the Board has revised the overall asset allocation from a 46/54 percent to a 55/45 percent equity/fixed income mix. In the future, the assets within these overall targets will be reviewed for possible redeployment. During the year, the system completed the purchase of 238 acres of undeveloped land within Jefferson City, Missouri. We are currently working with architects and engineers on the development of a high quality office park on this property. Additionally, the contract for investment consulting services was awarded to the Asset Consulting Group, Inc. of St. Louis, Missouri, and General American Investment Management Company was hired to manage an S&P index portfolio.

Also during the year the Medical Care Plan implemented a discount mail order pharmacy program as a means of helping to control the cost associated with our members use of maintenance type prescriptions. The program has been extremely well received by our members and we plan to continue the program. MOSERS also established a claims processing unit to process the medical claims in-house. Previously MOSERS contracted with outside firms to process the claims of the Plan. It is expected that with the claims being processed in-house, we will be able to process the claims of our members in a more timely and efficient manner. MOSERS also received approval from the Board of Trustees to proceed with the implementation of an optical file system. The optical system implementation is projected to span a three-year time frame and will involve converting the current hard copy files to those stored on optical disks. We expect to realize significant benefits in the areas of data security and retrieval once the project is fully implemented. The check clearing services of MOSERS was awarded to another local bank. As part of the award, MOSERS implemented a Federal Clearing Notice option of the bid response which has assisted MOSERS in meeting the bank's required compensating balances while keeping uninvested funds at a minimum.

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to MOSERS for its Component Unit Financial Report for the fiscal year ended June 30, 1990. The Certificate of Achievement is a prestigious national award recognizing conformance with the highest standards for preparation of state and local government financial reports.

In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized Component Unit Financial Report whose contents conform to program standards. Such CUFR must satisfy both generally accepted accounting principles and applicable legal requirements.

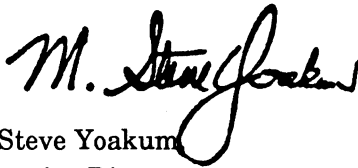
A Certificate of Achievement is valid for a period of one year only. MOSERS has received a Certificate of Achievement for the last two consecutive years (fiscal years ended 1989-1990). We believe our current report continues to conform to the Certificate of Achievement program requirements, and we are submitting it to GFOA.

This report is a product of the combined efforts of the MOSERS staff under the leadership of the Board of Trustees. It is intended to provide complete and reliable information as a basis for making management decisions, as a means for determining compliance with legal provisions, and as a means for evaluating responsible stewardship of the funds of the system. MOSERS continues to receive an unqualified opinion from our independent auditors whose report can be found on page 22.

This report is provided to the Governor, the State Auditor, the Joint Committee on Public Employee Retirement of the General Assembly, and all the state agencies. These agencies form the link between MOSERS and its members and their cooperation contributes significantly to the success of MOSERS. We hope the agencies and their employees find this report both informative and useful.

On behalf of the Board of Trustees, I would like to take this opportunity to express my gratitude to the staff, to the advisors, and to the people who have worked so diligently to assure the continued successful operation of the System.

Respectfully submitted,



M. Steve Yoakum  
Executive Director

# Certificate of Achievement for Excellence in Financial Reporting

Presented to  
**Missouri State Employees'  
Retirement System**

For its Component Unit  
Financial Report  
for the Fiscal Year Ended  
June 30, 1990

A Certificate of Achievement for Excellence in Financial Reporting is presented by the Government Finance Officers Association of the United States and Canada to government units and public employee retirement systems whose component unit financial reports (CUFR's) achieve the highest standards in government accounting and financial reporting.



*Gary R. Horsthem*

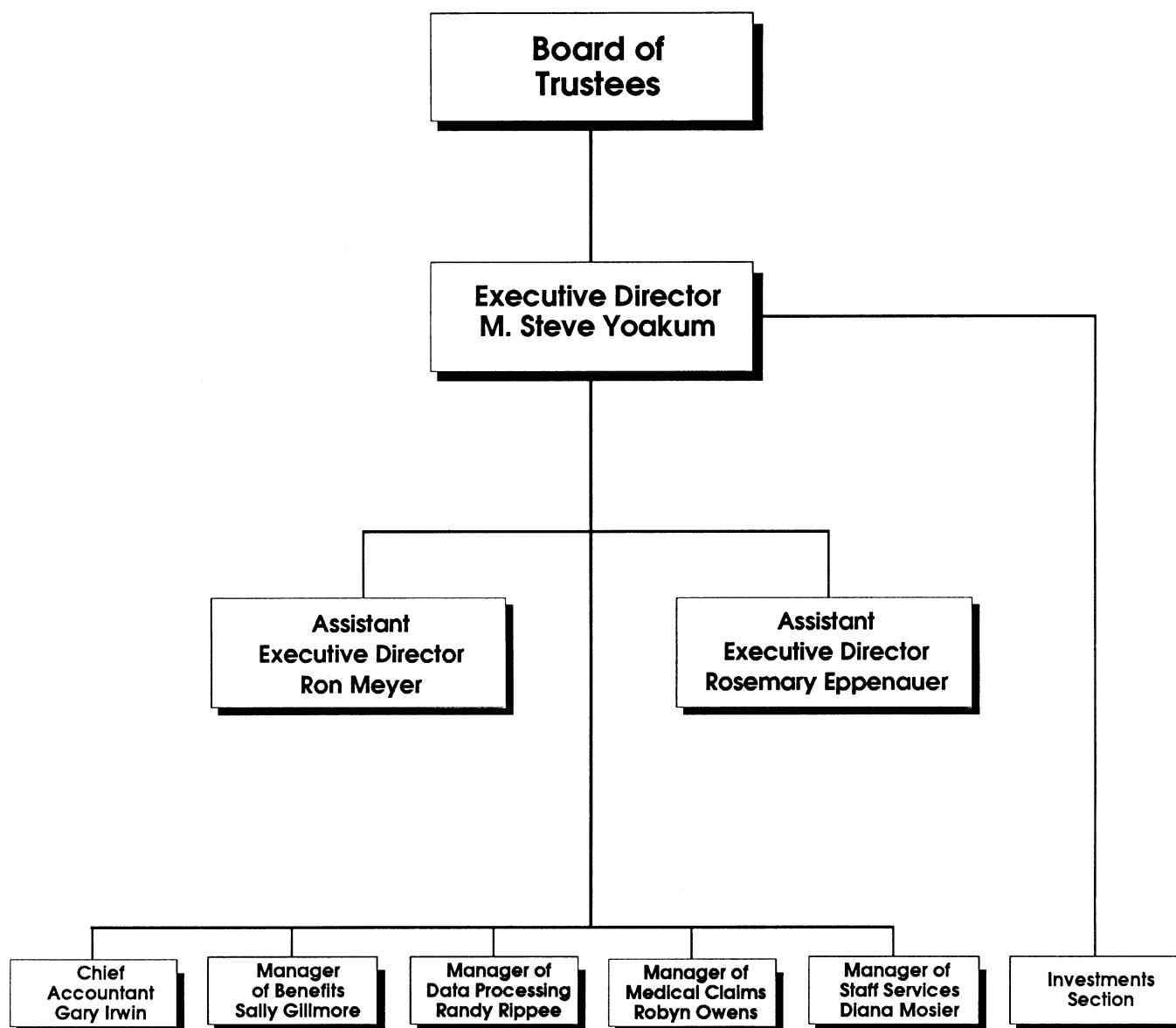
President

*Jeffrey L. Esser*

Executive Director



## Administrative Organization



## Organization of MOSERS

The Executive Director and the Assistant Executive Directors are responsible for the operation of the MOSERS office. The Executive Director is accountable to the Board and works with the Board as well as with the actuaries, the benefit consultants, the investment consultant and the investment managers. The MOSERS office has 115 employees and is divided into six sections.

☐ **Accounting**—This section is responsible for all financial records of the programs administered by MOSERS, including preparation of financial, statistical, and investment reports. Accounting performs the purchasing function for MOSERS, as well as interfaces with the investment consultant, investment managers, Office of Administration Accounting, various payroll/personnel departments, and accounting offices of Health Maintenance Organizations, life insurance companies, actuaries, banks, and the IRS. The Chief Accountant is responsible for the accounting section.

☐ **Benefits**—This section is divided into three units: Benefit Specialists, Membership Records, and the Insurance Team. Benefit Specialists are responsible for the administration of all aspects of the benefit program as it relates to members of the System, including conducting educational meetings throughout the state. Membership Records is responsible for establishing and maintaining all records of MOSERS' membership, including files, preparation, and verification of data entered into the computerized data base. The Insurance Team verifies any out-of-balances pertaining to monies expected for all insurance plans. They also generate and record all direct billing invoices. The Manager of Benefits is responsible for the benefits section.

☐ **Data Processing**—Using an IBM AS 400 computer, this section provides all computer and technical design support for MOSERS' programs. Data Processing is responsible for establishing and updating computer programs to implement plan changes. The Manager of Data Processing is responsible for this section.

☐ **Medical Claims**—This section was established during fiscal year 1991 to process the medical claims of our members participating in that plan. Claims are processed through a computer timeshare arrangement with Alta Health Strategies, Inc. The Manager of Medical Claims is responsible for this section.

☐ **Staff Services**—This section is responsible for providing clerical support for all Missouri State Employees' Retirement System personnel. The Manager of Staff Services also acts as secretary to the Board of Trustees and coordinates all the Board activities and serves as MOSERS' Personnel Officer. The Manager of Staff Services is responsible for the activities of this section.

☐ **Investments**—The Investment Section is responsible for the oversight of the investment program of MOSERS. This section reports directly to the Executive Director.

Although each section performs different job responsibilities, all the employees of the Retirement System work together to better serve our members.

## **Board of Trustees**

Chairperson:

**Duane Benton** – Director of Revenue  
Governor Appointed Member, Term expires 1/93  
*Investment Committee*

Vice Chairperson:

**Vernon Thompson** – State Representative  
House of Representatives Member, Term expires 12/31/92  
*Budget Committee, Health Care/Benefits Committee*

**Wendell Bailey** – State Treasurer  
Ex-Officio Member  
*Investment Committee, Legislative Committee*

**Herschel "Woody" Bledsoe**  
Elected Retired Member, Term expires 12/31/94  
*Health Care/Benefits Committee, Legislative Committee*

**Gail Chatfield** – State Representative  
House of Representatives Member, Term expires 12/31/92  
*Health Care/Benefits Committee\*, Legislative Committee*

**Thomas F. Hodges** – Probation Officer, Probation and Parole  
Elected Active Member, Term expires 12/31/94  
*Health Care/Benefits Committee, Personnel Committee*

**Ronald Larkin** – Director of Operations, State Courts Administrators Office  
Elected Active Member, Term expires 12/31/94  
*Budget Committee, Health Care/Benefits Committee*  
*Investment Committee\*, Personnel Committee*

**James Moody** – Commissioner of Administration  
Ex-Officio Member  
*Budget Committee\*, Investment Committee, Legislative Committee*

**Richard Rice** – Director, Department of Public Safety  
Governor Appointed Member, Term expires 1/93  
*Health Care/Benefits Committee, Personnel Committee\**

**John T. Russell** – Senator  
Senate Member, Term expires 12/31/92  
*Budget Committee, Investment Committee*

**John Scott** – Senator  
Senate Member, Term expires 12/31/94  
*Investment Committee, Legislative Committee\**

★ Denotes committee chairperson



## Letter from the Chairman



### MISSOURI STATE EMPLOYEES' RETIREMENT SYSTEM

906 LESLIE BOULEVARD  
JEFFERSON CITY, MISSOURI 65101

Telephone: 314-751-2342

MAILING ADDRESS  
P.O. Box 209  
Jefferson City, Missouri 65102

M. Steve Yoakum  
Executive Director

Rosemary Eppenauer  
Assistant Executive Director

Ron Meyer  
Assistant Executive Director

September 9, 1991

Dear Members:

With great pleasure, on behalf of the Board of Trustees, I present the Component Unit Financial Report of the Missouri State Employees' Retirement System (MOSERS) for the fiscal year ended June 30, 1991.

The MOSERS Board of Trustees witnessed several changes during this year. In the Board elections, retiree Joseph Deitrich and active member Jane Biederman-Fike did not seek reelection and were replaced by Woody Bledsoe and Tom Hodges. The System owes a special debt to Jane for 16 years' service on the Board, longer than any other elected Board member in history. In regard to legislative members, Sen. John Russell replaced Sen. Tom McCarthy and Rep. Vernon Thompson replaced Rep. Chris Graham. While we miss the experience and wisdom of Joe, Jane, Tom and Chris, we look forward to working with the new members.

This fiscal year brought many changes to MOSERS and in no area was this more evident than in the Missouri State Medical Care Plan. Medical costs continue to skyrocket at a time when members and taxpayers are least able to afford such increases. In our continuing effort to improve the State health care reimbursement program, we instituted several changes:

- Self-insuring coverage for major organ transplants,
- Addition of a mail order pharmacy option for prescription drugs,
- Expansion of coverage for children and stepchildren,
- No increase in member-paid medical premiums for 1991.

Perhaps the most significant action taken by the Board of Trustees this year was the creation of an "in-house" medical claims processing unit. Since creation of the Missouri State Medical Care Plan in the early 1970's, claims have been adjudicated by outside third-party administrators. As the Medical Care Plan grew in numbers and complexity, the time required to adjudicate member claims became unacceptable to the Board. Three changes of administrators in each of the last three years did not improve the situation. Therefore, in October 1990, the Board voted that MOSERS staff perform this function, appropriating approximately \$3.5 million to establish a medical claims processing unit. By January of 1991, the first claims were being paid; by the close of the fiscal year on June 30, MOSERS claim staff processed most member medical claims within a ten-working-day period, with high accuracy rates. This key initiative will benefit MOSERS members for years.

On behalf of the other members of the Board, I thank the members, retirees, advisers and staff who have worked so diligently to assure the successful operation of the System. As fiduciaries of the MOSERS trust funds, the Board of Trustees will strive to ensure that MOSERS continues to operate prudently and responsively.

Sincerely,



Duane Benton, Chairman  
Board of Trustees

## **Consulting Services**

### **Actuary**

**Gabriel, Roeder, Smith & Co.**  
Gary W. Findlay  
Detroit, Michigan

### **Auditors**

**KPMG Peat Marwick**  
Certified Public Accountants  
Rick Corcoran  
Philip Keipp  
St. Louis, Missouri

### **Legal Counsel**

**Thompson & Mitchell**  
Attorneys at Law  
Allen D. Allred  
St. Louis, Missouri

### **Medical Care Plan Consultant**

**Towers, Perrin, Forster  
& Crosby**  
Stephen C. Jackstadt  
St. Louis, Missouri

### **Investment Management Consultant**

**Asset Consulting Group, Inc.**  
Charles Holmes  
Steve Holmes  
St. Louis, Missouri

### **Equity Investment Advisors**

**Alliance Capital  
Management Corp.**  
Thomas M. Perkins  
San Francisco, California

### **CFW Management Company**

J. Owen McPherson  
Kansas City, Missouri

### **Delaware Investment Advisors**

Richard Unruh  
Philadelphia, Pennsylvania

### **Shields Asset Management**

Jay Carr  
White Plains, New York

### **Twentieth Century**

Stephen Barney  
Kansas City, Missouri

### **General American Investment Management Company**

Douglas Koester  
St. Louis, Missouri

### **Fixed Income**

### **Investment Advisors**

**Boatmen's Trust Company**  
Robert Franklin, Sr.  
St. Louis, Missouri

### **Loomis, Sayles & Co.**

John de Beer  
Boston, Massachusetts

### **Mississippi Valley Advisors, Inc.**

Fred H. Edwards  
Craig Campbell  
St. Louis, Missouri

### **United Missouri Investment Counsel Service**

David B. Anderson  
Lou Bradshaw  
Kansas City, Missouri

### **Venture Capital Investment Advisor**

**Brinson Partners**  
Bart Holaday  
T. Bondurant French  
Chicago, Illinois



## Summary of Plan Provisions

The Missouri State Employees' Retirement System (MOSERS), established September 1, 1957, is governed by the statutes of the State of Missouri.

### Purpose

MOSERS provides retirement, survivor, disability, life insurance, and medical benefits to its members in the most efficient and economical manner possible.

MOSERS administers retirement benefits for most State employees, including members of the Water Patrol, members of the General Assembly, and Elected State Officials. MOSERS is a non-profit entity which has the responsibility of administering the law in accordance with the expressed intent of the General Assembly and bears a fiduciary obligation to the State of Missouri, the taxpayers, and the State employees who are its beneficiaries.

This is a summary of the provisions of the Revised Statutes of Missouri (RSMo), as amended, that govern the programs which MOSERS administers. It does not amend or overrule any applicable statute or administrative rule and, in the event of a conflict, the applicable statute or rule would apply.

### Administration

The statutes provide that the administration of MOSERS be vested in an 11-member Board of Trustees. The Board is comprised of:

- ✓ Two members of the Senate, appointed by the President Pro Tem of the Senate
- ✓ Two members of the House, appointed by the Speaker of the House

- ✓ Two members appointed by the Governor
- ✓ Three members of the System, two actives and one retiree, elected by the members
- ✓ The State Treasurer
- ✓ The Commissioner of Administration

The management of MOSERS is the responsibility of the Executive Director who is appointed by the Board and serves at its pleasure.

The Executive Director acts as advisor to the Board on all matters pertaining to the System and, with the approval of the Board, contracts for professional services and employs the remaining staff needed to operate the System.

### Retirement

#### Eligibility

Members who work in a position normally requiring at least 1,000 hours of work a year and who are not simultaneously accumulating Creditable Service under another retirement program supported by State contributions (other than social security) are eligible and required to participate in the Retirement Plan.

#### Unreduced Retirement Benefits

A member may retire with full benefits when he/she attains:

<u>Age</u>	<u>Service</u>
55	30 years
60	15 years
65	10 years
65	4 years*

\*Must be retiring directly from active employment.

A member of the General Assembly may retire with full benefits when he/she attains:

<u>Age</u>	<u>Service</u>
55	5 biennial assemblies
60	3 biennial assemblies

Uniformed members of the Water Patrol may retire with full benefits when he/she attains:

<u>Age</u>	<u>Service</u>
55	10 years
55	4 years*

\*Must be retiring directly from active employment.

## Early Retirement

(Actuarially reduced)

Members of MOSERS may retire early with an actuarially reduced benefit at age 55 with 10 years of service. General Assembly members may retire early at age 55 with three biennial assemblies. Elected State Officials may retire early at age 55 with 10 years of service.

There are no early retirement provisions for uniformed members of the Water Patrol.

## Benefit Formula

The benefit formula for members of MOSERS is 1-1/2 percent of the average of the highest 36 consecutive months of salary times the years of Creditable Service.

General Assembly members receive:

- ☐ \$80 x number of biennial assemblies (3 or 4 biennial assemblies) or,
- ☐ \$105 x number of biennial assemblies (5 to 9 biennial assemblies) or,
- ☐ \$130 x number of biennial assemblies (10 or more).

Elected State Officials with less than 12 years of service as an elected official receive 1-1/2 percent of the average of their highest three

consecutive calendar years of salary times years of Creditable Service. Those officials with 12 or more years of service receive 50 percent of the statutory salary paid to the current elected official in the highest position which the retiree previously held.

Uniformed members of the Water Patrol receive 1-1/2 percent of the average of their highest 36 consecutive months of salary times years of creditable service. That amount is then increased by 33-1/3 percent to determine their normal retirement annuity.

## Creditable Service

Creditable Service is a combination of the Creditable Prior Service a member has accrued before becoming a member of MOSERS and the years and full months of Membership Service the member has as a member of MOSERS.

Creditable Service is used in determining the amount of the member's benefit under the System.

Vesting is based on service which is recognized in determining the member's eligibility for benefits under the System.

<u>Service</u>	<u>% Vested</u>
5 years	50%
6 years	60%
7 years	70%
8 years	80%
9 years	90%
10 years	100%

## Optional Forms of Payment

Retirement benefits are paid according to the election made by the member just prior to retirement. Members may choose a life income annuity and receive a full benefit with no survivor option or the member may choose a 50-percent or 100-percent joint and survivor option. If one of the latter is chosen, the benefit is actuarially reduced, and upon the members' death the survivor receives either 50 percent or 100 percent of the member's reduced benefit.

Members of the Department of Conservation, General Assembly, and Elected Officials automatically receive a 50-percent survivor benefit for service in those positions without an actuarial reduction in their benefit.

Members of MOSERS may also choose lifetime income with either 60 or 120 guaranteed monthly payments. If the member dies before receiving the payments, the beneficiary receives the remaining payments.

### Cost-of-Living Adjustments

Retired members receive annual cost-of-living adjustments (COLAs) equal to 80 percent of the previous year's change in the Consumer Price Index (CPI) with a minimum of four percent and maximum of five percent of the monthly benefit received the previous year.

Members may receive a cumulative maximum of 65 percent of their base benefit in cost-of-living adjustments.

### Survivor's Benefit

A 100-percent joint and survivor benefit, based on the member's accrued base benefit, will be paid to the eligible surviving spouse if the member is fully vested and dies prior to retirement.

With no eligible surviving spouse, the member's unemancipated minor children will receive 50 percent of the fully vested member's accrued base benefit.

### Contributions

MOSERS is a non-contributory plan. Members are not required to make any contributions; the entire cost is paid by the State of Missouri. The contribution rate paid by the State for fiscal year 1991 was 9.9 percent of the membership payroll.

## Insurance Plans

### Long-Term Disability

Members of MOSERS in a position normally requiring 1,000 hours of work a year are covered under the Long-Term Disability Plan, unless they work for a State agency which has its own long-term disability plan. Eligible employees receive 60 percent of their compensation minus primary social security, Workers' Compensation, and employer provided income. The benefit commences on the 181st day of disability or after sick leave expires, whichever occurs last. Long-term disability benefits cease when the disability ends, when retirement benefits begin, when the member returns to work, or upon the member's death.

### Life Insurance

#### Basic Life Insurance

Active employees covered under the MOSERS life insurance plan receive \$15,000 of Basic Life Insurance on the first of the month coinciding with or following the date of employment. The cost of Basic Life Insurance is paid by the State. Eligible members, who immediately retire from active employment, are provided \$5,000 of Basic Life Insurance by the State at no cost to the member. Retired members may convert up to \$10,000 to an individual policy with the insurance carrier at individual rates. Terminating employees may convert up to \$15,000 of Basic Life Insurance at individual rates.

#### Optional Life Insurance

Members working for an agency covered under MOSERS life insurance plan are eligible for Optional Life Insurance on the first of the month coinciding with or following their date of employment. Members are responsible for paying the entire cost of their Optional Life Insurance. The two options available are:

— Option A: Employee may elect 1, 2, or 3 times annual salary. The amount automatically increases or decreases each May 1 based on the preceding January salary.

— Option B: Employee may elect a flat amount not to exceed three times their annual salary.

Members who immediately retire from active employment after August 13, 1988, may continue up to \$10,000 of their Optional Life Insurance at the group rate and may convert their remaining Optional Life Insurance at individual rates. Terminating employees may convert an amount up to the amount they had as an active employee at individual rates.

## **Medical Insurance**

### **Active Employees**

Members of MOSERS working for an agency covered by the Missouri State Medical Care Plan are eligible for medical care coverage on the first of the month following their date of employment. The annual deductible for an individual is \$300, and the maximum deductible for family coverage is \$900.

The Medical Care Plan pays 80 percent of the usual, customary, and reasonable (UCR) charges after the deductible is paid. Outpatient diagnostic X-ray and laboratory work is paid at 100 percent. The yearly out-of-pocket maximum is \$1,800 for an individual and \$3,900 for a family.

A maximum lifetime benefit of \$1,000,000 is provided to each eligible member of the Plan.

If a member uses a provider enrolled in the Preferred Provider Organization (PPO), the plan will pay 90% of the UCR charges instead of the regular 80 percent. This could significantly reduce the annual out-of-pocket maximum for members of the plan. Also, members are only responsible for a \$10 copayment for any office visit provided by a PPO physician.

Under the federal law COBRA, employees may choose to continue their medical coverage at termination of employment, unless eligible for Medicare or covered by another group health plan, but participants must pay the entire cost. Effective June 14, 1989, terminated vested members

may elect to continue medical coverage by paying the entire premium cost.

### **Retired Employees**

Retiring employees may continue their medical care coverage if they have been covered under the Missouri State Medical Care Plan for two years prior to termination or since they were first eligible for medical coverage. Retirees 65 or older and retirees eligible for Medicare due to a disability may select one of three supplemental medical care plans.

The three plans all coordinate with Medicare, but they differ in coverage and cost. The deductible for the individual and family is the same as the deductible for active employees.

### **HMO**

Employees working for an agency covered under the MOSERS Medical Care Plan who live in a Health Maintenance Organization (HMO) service area are provided the opportunity to enroll in either an HMO or the MOSERS Medical Care Plan. HMO coverage is provided to employees living in the St. Louis and Kansas City areas. No annual deductible is charged, but copayments are required for some medical treatments. The types of coverage and the costs vary with each HMO. At June 30, 1991, five HMOs were available to MOSERS members.

## **Judges/Administrative Law Judges**

MOSERS also is responsible for the administration of the retirement, life insurance, disability, and medical benefits for judges of state courts and administrative law judges/legal advisors of the Division of Workers' Compensation. (Administrative law judges/legal advisors will hereafter be referred to as ALJs.) The benefits provided to judges and ALJs are funded separately. Judges' benefits are paid by the State on a "pay-as-you-go"

basis, while the benefits for ALJs are funded by the State. The State contributed 26.61% of the ALJs' payroll each month during fiscal year 1991.

### Normal Retirement

Judges may retire at age 62 or at age 60 with 15 years. The benefit is based on the years and months of Creditable Service the judge has and the judge's salary.

ALJs are eligible for normal retirement when they reach at least age 65 or when they have reached age 60 and have 20 or more years of Creditable Service. The benefit is based on years and full months of service and salary.

### Early Retirement

Judges with less than 15 years of service may elect retirement as early as age 60. Judges who retire between age 60 and 62 receive a benefit equal to the proportion of normal retirement benefits that the judges' service bears to 15 years.

There are no early retirement provisions for ALJs.

### Benefit Formula

Judges with 12 or more years of service receive a monthly benefit of one-half the salary of a judge in the highest court in which the judge served at the time the judge retires from office. Judges with less than 12 years of service receive a benefit that is calculated based on the proportion of normal retirement benefits that the judge's service bears to 12 years.

ALJs with 12 or more years of service receive a monthly benefit of one-half of their average monthly salary, based on their highest annual salary.

ALJs with less than 12 years of service receive a benefit equal to the proportion of normal retirement benefits that their service bears to 12 years.

### Creditable Service

Creditable Service is a combination of the Creditable Prior Service accrued before becoming a member and the years and full months of service

judges or ALJs have as a member of their respective retirement plans. Creditable Service is used in determining the amount of the benefit under each retirement plan.

### Cost-of-Living

Judges and ALJs may apply to become special consultants, thus providing annual cost-of-living adjustments.

### Survivors Benefit

The survivor benefit of an active judge or ALJ equals 50 percent of the benefit accrued to age 70, unless the period of service could not have been 12 years by age 70 which results in a reduced benefit being paid. The survivor benefit of a terminated judge or ALJ with 12 or more years of service is 50 percent of the accrued benefit. The benefit to the survivor of a retired judge equals 50 percent of the monthly retirement benefit.

### Disability

Judges who become disabled receive one-half of their salary on the date of disability. This is a Constitutionally-provided disability benefit paid until his/her term expires. In addition, judges and ALJs receive the same Long-Term Disability coverage as the other members of MOSERS.

### Life Insurance

The Basic and Optional Life Insurance benefits provided to active judges and ALJs are the same as those provided to other members of MOSERS as described on pages 18-19. Basic Life Insurance for retiring or terminating judges and ALJs ends on the date of termination of employment.

Retired judges and ALJs may convert Basic and Optional Life Insurance to an individual policy and pay the individual rate.

### Medical Insurance

The medical insurance coverage provided to judges and ALJs is the same coverage provided to members of MOSERS as described previously.



# Financial Section

## Independent Auditors' Report

**KPMG** Peat Marwick

Certified Public Accountants

1010 Market Street  
St. Louis, MO 63101

August 23, 1991

The Board of Trustees  
Missouri State Employees' Retirement System  
Jefferson City, Missouri 65101

We have audited the component unit financial statements of the Missouri State Employees' Retirement System as of and for the year ended June 30, 1991, as listed in the accompanying table of contents. These component unit financial statements are the responsibility of the Retirement System's management. Our responsibility is to express an opinion on these component unit financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the component unit financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the component unit financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the component unit financial statements referred to above present fairly, in all material respects, the financial position of the Missouri State Employees' Retirement System, at June 30, 1991, and the results of its operations and cash flows for the year then ended in conformity with generally accepted accounting principles.

Our audit was made for the purpose of forming an opinion on the component unit financial statements taken as a whole. The combining and individual fund financial statements and supplementary information included in pages 37 through 46 are presented for purposes of additional analysis and are not a required part of the component unit financial statements of the Missouri State Employees' Retirement System. Such information, except for that portion marked "unaudited," on which we express no opinion, has been subjected to the auditing procedures applied in the audit of the component unit financial statements and, in our opinion, is fairly presented in all material respects in relation to the component unit financial statements taken as a whole.



Member Firm of  
Klynveld Peat Marwick Goerdeler

*KPMG Peat Marwick*

# Missouri State Employees' Retirement System Combined Balance Sheet – All Fund Types

June 30, 1991

	Fiduciary Fund Type Pension Trusts	Proprietary Fund Type Internal Service	Total (Memorandum Only)
<b>ASSETS</b>			
Contributions Receivable	\$ 9,016,754	\$ 5,618,336	\$ 14,635,090
Accrued Interest and Dividends	14,424,328	523,405	14,947,733
Accounts Receivable – Securities Sold	12,523,678	0	12,523,678
Accounts Receivable – Other	238,703	0	238,703
Investments, at Cost	1,950,915,385	24,000,917	1,974,916,302
Office Building, Equipment and Fixtures Net of Accumulated Depreciation	2,985,588	0	2,985,588
Total Assets	\$ 1,990,104,436	\$ 30,142,658	\$ 2,020,247,094
<b>LIABILITIES AND FUND EQUITY</b>			
<i>Liabilities:</i>			
Accounts Payable – Securities Purchased	\$ 21,524,289	\$ 0	\$ 21,524,289
Collateral for Securities on Loan	215,674,014	0	215,674,014
Medical Claims Payable	0	15,825,582	15,825,582
Other	12,876,128	7,270,875	20,147,003
Total Liabilities	250,074,431	23,096,457	273,170,888
<i>Fund Equity:</i>			
Fund Balances:			
Reserved for Employees' Retirement Benefits:			
Member Contributions – MOSERS	465,307	0	465,307
State Contributions – MOSERS (Unfunded Actuarial Liability \$259,230,717)	1,734,997,975	0	1,734,997,975
State Contributions – ALJRS (Unfunded Actuarial Liability \$2,494,921)	4,566,723	0	4,566,723
Retained Earnings:			
Reserved for Employee Medical and Life Insurance Benefits:			
Basic Life Contributions in Excess of Funding Requirements	0	800,079	800,079
Accumulated State Contributions	0	29,046,249	29,046,249
Unreserved Accumulated Employee Contribution Deficit	0	(22,800,127)	(22,800,127)
Total Fund Equity	1,740,030,005	7,046,201	1,747,076,206
Total Liabilities and Fund Equity	\$ 1,990,104,436	\$ 30,142,658	\$ 2,020,247,094

See accompanying Notes to the Financial Statements.

**Missouri State Employees' Retirement System  
Combined Statement of Revenues, Expenses, and  
Changes in Fund Balance/Retained Earnings – All Fund Types**

Year Ended June 30, 1991

	Fiduciary Fund Type Pension Trusts	Proprietary Fund Type Internal Service	Total (Memorandum Only)
<b>OPERATING REVENUES</b>			
State Contributions	\$ 111,841,632	\$ 48,641,390	\$ 160,483,022
Member Contributions	0	16,954,753	16,954,753
Insured Plans Premium Receipts	0	23,871,091	23,871,091
State Contributions Basic Life Plan	0	2,243,495	2,243,495
Payments for Military Service Credit	446,286	0	446,286
State Reimbursements	6,572,690	0	6,572,690
Investment Income	123,860,829	0	123,860,829
Miscellaneous Income	9,594	354,435	364,029
Total Operating Revenues	242,731,031	92,065,164	334,796,195
<b>OPERATING EXPENSES</b>			
Retirement Benefits	64,460,472	0	64,460,472
Disability Benefits	659,961	0	659,961
Survivors' Benefits	2,566,480	0	2,566,480
Contribution Refunds	19,297	0	19,297
Medical Claims	0	67,969,018	67,969,018
Basic Life Benefits	0	2,000	2,000
Basic Life Premium Disbursements	0	2,242,193	2,242,193
Insured Plans Premium Disbursements	0	24,722,457	24,722,457
Premium Refunds	0	212,826	212,826
Administrative	7,898,664	5,814,424	13,713,088
Total Operating Expenses	75,604,874	100,962,918	176,567,792
Operating Revenues Over(Under) Expenses	167,126,157	(8,897,754)	158,228,403
<b>NON OPERATING REVENUES</b>			
Investment Income	0	2,191,155	2,191,155
Net Revenues Over (Under) Expenses	167,126,157	(6,706,599)	160,419,558
Fund Balance/Retained Earnings July 1, 1990	1,572,903,848	13,752,800	1,586,656,648
Fund Balance/Retained Earnings June 30, 1991	\$ 1,740,030,005	\$ 7,046,201	\$ 1,747,076,206

See accompanying Notes to the Financial Statements.

# Missouri State Employees' Retirement System

## Combined Statement of Cash Flows – All Fund Types

Year Ended June 30, 1991

	Fiduciary Fund Type Pension Trusts	Proprietary Fund Type Internal Service	Total (Memorandum Only)
<b>Cash flows from operating activities:</b>			
Cash received from employer and members	\$ 112,584,784	\$ 91,877,620	\$ 204,462,404
Cash reimbursements from state	6,505,186	0	6,505,186
Other miscellaneous income	9,604	356,194	365,798
Cash benefit payments	(67,691,113)	0	(67,691,113)
Cash payment for medical claims	0	(64,157,696)	(64,157,696)
Cash payment to members for basic life claims	0	(2,000)	(2,000)
Premium payments to outside carriers	0	(27,243,956)	(27,243,956)
Refund of premiums to members	0	(212,826)	(212,826)
Cash payment for contribution refunds	(19,959)	0	(19,959)
Cash payment to employees for services	(1,168,976)	(1,039,504)	(2,208,480)
Cash payment to other suppliers of goods and services	(7,194,614)	(4,583,706)	(11,778,320)
Cash received from investment income	120,419,778	0	120,419,778
Net cash provided (used) by operating activities	163,444,690	(5,005,874)	158,438,816
<b>Cash flows from capital and related financing activities:</b>			
Sale of fixed assets	753	0	753
Purchase of fixed assets	(1,533,175)	0	(1,533,175)
Net cash used for capital and related financing activities	(1,532,422)	0	(1,532,422)
<b>Cash flows from investing activities:</b>			
Purchase of investment securities	(4,249,927,421)	(105,463,527)	(4,355,390,948)
Cash disbursed for securities lending	(2,907,444,711)	0	(2,907,444,711)
Proceeds from sale and maturities of investment securities	3,976,257,536	106,715,176	4,082,972,712
Cash received from securities lending	3,016,228,026	0	3,016,228,026
Cash received from investment income	0	2,070,065	2,070,065
Net cash provided (used) by investing activities	(164,886,570)	3,321,714	(161,564,856)
Net decrease in cash	(2,974,302)	(1,684,160)	(4,658,462)
Cash at beginning of year	(6,674,505)	(1,600,733)	(8,275,238)
Cash at end of year	\$ (9,648,807)	\$ (3,284,893)	\$ (12,933,700)
<b>Reconciliation of net revenues over(under) expenses to net cash provided (used) by operating activities:</b>			
Net revenues over(under) expenses	\$ 167,126,157	\$ (8,897,754)	\$ 158,228,403
Adjustments to reconcile net revenues over(under) expenses to net cash provided (used) by operating activities:			
Depreciation	98,165	0	98,165
Change in assets and liabilities:			
(Increase)decrease in operational accounts receivable	(3,298,093)	158,505	(3,139,588)
Increase(decrease) in operational accounts payable	(481,539)	3,733,375	3,251,836
Total adjustments	(3,681,467)	3,891,880	210,413
Net cash provided (used) by operating activities	\$ 163,444,690	\$ (5,005,874)	\$ 158,438,816

See accompanying Notes to the Financial Statements.

## **Missouri State Employees' Retirement System Notes to the Financial Statements**

Year Ended June 30, 1991

### **(1) Plan Descriptions**

#### **MOSERS**

The Missouri State Employees' Retirement System (MOSERS) is a single-employer, public employee retirement system administered in accordance with Sections 104.010 and 104.320 to 104.800 of the Revised Statutes of Missouri. As established under Section 104.320, RSMo, "The Missouri State Employees' Retirement System shall be a body corporate and an instrumentality of the state. In the System shall be vested the powers and duties specified in Sections 104.010 and 104.320 to 104.800 and such other powers as may be necessary or proper to enable it, its officers, employees and agents to carry out fully and effectively all the purposes of Sections 104.010 and 104.320 to 104.800."

Responsibility for the operation and administration of the System is vested in the MOSERS Board of Trustees. Due to the nature of MOSERS' reliance on the funding from the State of Missouri and the overall control of policies by State officials on the Board of Trustees, MOSERS is considered a part of the State of Missouri financial reporting entity and is included in the State's financial reports as a pension trust fund.

Substantially all full-time State employees who are not covered under another State-sponsored retirement plan are eligible for membership in MOSERS. On June 30, 1991, membership consisted of the following:

Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving them	19,505
Current employees	<u>46,725</u>
Total Membership	<u><u>66,230</u></u>

MOSERS provides retirement, death and disability benefits to its members. Benefits for general State employees are 50 percent vested after five years of creditable service and fully vested after 10 years of creditable service (four years for elected officials and six years for legislators). Employees may retire at or after age 55 and receive a reduced benefit (or full benefits if they have 30 years or more of service).

The State of Missouri is required to make all contributions to the Plan. Prior to September 1, 1972, contributions by members were required. Accumulated employee contributions made prior to that time, plus interest, are refundable to the member or designated beneficiaries.

#### **ALJRS**

The Administrative Law Judges' Retirement System (ALJRS) is a single-employer, public employee retirement system administered in accordance with Sections 287.812 to 287.855, RSMo. Responsibility for the operation and administration of the System is vested in the MOSERS Board of Trustees. Due to the nature of MOSERS' reliance on the funding from the State of Missouri and the overall control of policies by State officials on the Board of Trustees, the Administrative Law Judges' Retirement System is considered a part of the State of Missouri financial reporting entity and is included in the State's financial reports as a pension trust fund.



Individuals appointed or employed as Administrative Law Judges or Legal Advisors of the Division of Workers' Compensation are eligible for membership in ALJRS.

ALJRS provides retirement, death and disability benefits to its members. Employees who retire on or after age 65 with 12 or more years of creditable service are eligible for a monthly retirement benefit equal to one-half of the highest salary received during the period of service. Employees with less than 12 years of service are eligible for a reduced benefit upon retirement. The State of Missouri is required to make all contributions to the plan. On June 30, 1991, membership consisted of the following:

Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving them	17
Current employees	<u>34</u>
Total Membership	<u>51</u>

#### Judicial Retirement Plan

The Judicial Retirement Plan provides retirement, death and disability benefits to those serving as judges in the State of Missouri. Retirement benefits for members of the judiciary are administered and paid by MOSERS. Amounts paid are reimbursed monthly from appropriations of State funds and are not obligations of MOSERS.

Supreme Court judges who are at least age 65 with eight or more years of creditable service in that capacity (or age 60 with 12 years of creditable service) are eligible for retirement benefits equal to one-half of the salary provided by law at the time of retirement. Other judges are eligible for retirement benefits at age 62 with 12 years of creditable service equal to one-half of the salary paid to the judge in the highest court served. On June 30, 1991, membership consisted of the following:

Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving them	350
Current employees	<u>346</u>
Total Membership	<u>696</u>

#### Missouri State Insurance Plan

The Missouri State Insurance Plan is an internal service fund of the State of Missouri administered by MOSERS. It provides medical insurance for eligible members of the Missouri State Employees' Retirement System (except employees of the Department of Conservation, the Division of Employment Security, Highway Department, Highway Patrol, and State Colleges and Universities), members of the Judicial Retirement Plan, legislators, statewide elected officials, and certain members of the Public School Retirement System; basic life insurance for active employees of the aforementioned groups; and optional life insurance for active employees and retirees. Beginning January 1, 1986, eligible members were covered by the Long-Term Disability Plan. Due to the nature of MOSERS' reliance on the funding from the State of Missouri and the overall control of policies by State officials on the Board of Trustees, the Missouri State Insurance Plan is considered a part of the State of Missouri financial reporting entity and is included in the State's financial reports as an internal service fund.

## (2) Summary of Significant Accounting Policies and Plan Asset Matters

### Basis of Accounting

The financial statements of the MOSERS, ALJRS, and Missouri State Insurance Plan were prepared using the accrual basis of accounting. Employer and employee contributions are recognized as revenues in the period in which employee services are performed and expenses are recorded when the corresponding liabilities are incurred, regardless of when payment is made. Medical claims expense is recognized when claims are incurred as estimated by the plan's insurance consultant. The direct method of reporting cash flows is used.

### Cash

Cash balances represent both operating cash accounts held by the bank and investment cash on deposit with the investment custodian. To maximize investment income, the float caused by outstanding checks is invested, thus causing a negative book balance. The negative book balance has been reflected in other liabilities. The following is a schedule of the book and bank balances of all cash accounts. All deposits are fully insured by the FDIC. In addition to the FDIC insurance coverage on the accounts of MOSERS, the following security was pledged to MOSERS by the bank at June 30, 1991:

\$1,000,000      Connecticut State General Obligation  
8.5%, Due 1/1/96

### Cash Balances

<u>Pension Trusts</u>		<u>Internal Service</u>	
<u>Book</u>	<u>Bank</u>	<u>Book</u>	<u>Bank</u>
\$ (9,648,807)	\$ (3,580,538)	\$ (3,284,893)	\$ 123,743

### Total Memorandum Only Columns

Total columns on the combined statements are captioned "(Memorandum Only)" to indicate that they are presented only to facilitate financial analysis. Data in these columns do not present financial position, results of operations, or cash flows in conformity with generally accepted accounting principles. Such data is not comparable to a consolidation since interfund eliminations have not been made.

### Method Used to Value Investments

Investments are carried at cost subject to adjustment for significant market declines judged to be other than temporary. The cost of investments sold are determined using the average cost of that security. Bond premium and discount are not amortized and are recognized only upon sale or maturity of the related bonds.

Amortization of bond premium and discount would not significantly affect total investment income. Dividend income is recognized based on dividends declared. Security transactions are accounted for on the trade date securities are purchased or sold. Net realized gains and losses on investments are included in investment income. Gains and losses on exchanges of fixed-income securities are recognized on a completed transaction basis. The following is a summary of the cost and market values of the investments as reported on the Combined Balance Sheet.

### Investments

	Pension Trust Funds		Internal Service Fund		Total (Memorandum Only)	
	Cost	Market	Cost	Market	Cost	Market
Common Stock	\$ 784,636,906	\$ 854,322,847	\$ 0	\$ 0	\$ 784,636,906	\$ 854,322,847
Preferred Stocks	15,891,658	15,303,570	0	0	15,891,658	15,303,570
Treasury Bonds, Notes and Bills	328,566,299	344,985,359	21,838,239	22,252,952	350,404,538	367,238,311
Government Bonds	173,810,001	201,655,967	0	0	173,810,001	201,655,967
FHA Mortgages	2,286,042	2,259,520	0	0	2,286,042	2,259,520
VA Mortgages	11,391	13,893	0	0	11,391	13,893
Corporate Bonds	173,610,530	147,397,321	0	0	173,610,530	147,397,321
Convertible Bonds	11,026,376	10,630,500	0	0	11,026,376	10,630,500
Guaranteed Investment Contracts	11,204,006	11,204,007	0	0	11,204,006	11,204,007
Real Estate Loans and Mortgages	22,187,591	24,008,686	0	0	22,187,591	24,008,686
Real Estate Equity Holdings	86,167,300	76,294,029	0	0	86,167,300	76,294,029
Venture Capital Limited Partnerships	32,295,161	31,126,630	0	0	32,295,161	31,126,630
Short-Term Investments	277,577,997	277,577,996	2,162,678	2,162,678	279,740,675	279,740,674
Repurchase Agreements	31,644,127	31,644,127	0	0	31,644,127	31,644,127
Totals	<u>\$ 1,950,915,385</u>	<u>\$ 2,028,424,452</u>	<u>\$ 24,000,917</u>	<u>\$ 24,415,630</u>	<u>\$ 1,974,916,302</u>	<u>\$ 2,052,840,082</u>

### Categories of Asset Risks

All investments are governed primarily by an investment authority known as the "prudent person rule." The "prudent person rule," as set forth by State statute, establishes a standard for all fiduciaries, which includes anyone who has authority with respect to the funds. The System's investments are categorized to give an indication of the level of risk assumed by the System at year-end. **Category 1** includes investments that are insured or registered or which are held by the System or its agent in the System's name. **Category 2** includes uninsured and unregistered investments which are held by the counterparty's trust departments or agent in the System's name. **Category 3** includes uninsured and unregistered investments which are held by the counterparty, its trust department, or agent, but not in the System's name. As of June 30, 1991, all investments of the System are classified in **Category 1**.

### **Collateral for Securities on Loan**

The pension trust funds participate in a securities lending program administered by Boatmen's Trust Company (the Custodian). Certain securities of the pension funds are loaned to participating brokers. Brokers who borrow the securities provide collateral, usually in the form of cash, valued at 102% of the market value of the securities on loan. Adjustments are made daily to the collateral to mark to market the value of the securities on loan. Investment income and losses on securities loaned are recognized by the pension funds. The collateral is invested on behalf of the pension funds and the investment income from the invested collateral is shared equally between the pension funds and the custodian, representing their compensation for operating the program. The Custodian provides for full indemnification to the pension funds for any losses that might occur in the program.

### **Office Building, Equipment, and Fixtures**

Office building, equipment, and fixtures are capitalized at cost when acquired. Improvements which increase the useful life of the property are capitalized. Maintenance and repairs are charged to expense as incurred. Depreciation is computed using the straight-line method over the estimated useful lives of the related assets of 3 to 40 years.

The following represents the components of the amount reported on the Combined Balance Sheet as of June 30, 1991:

Land		\$ 71,000
Building, Equipment and Fixtures	\$ 3,354,814	
Less Accumulated Depreciation	<u>440,226</u>	<u>2,914,588</u>
Total		<u><u>\$ 2,985,588</u></u>

### **(3) Funding Status and Progress**

The "Pension Benefit Obligation" is a standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases, estimated to be payable in the future as a result of employee service to date. The measure is the actuarial present value of credited projected benefits and is intended to help users assess the System's funding status on a going-concern basis, assess progress being made in accumulating sufficient assets to pay benefits when due, and allow for comparisons with other public employees' retirement systems. The measure is independent of the actuarial funding method used to determine contributions to the plans.

The Pension Benefit Obligation was determined as part of an actuarial valuation of the System as of June 30, 1991. Significant actuarial assumptions used in the valuation include (a) a rate of return on the investment of present and future assets of 8.5% per year compounded annually, (b) projected salary increases of 5.0% per year compounded annually, attributable to inflation, (c) additional projected salary increases ranging from 1.0% to 4.0% per year, depending on age, attributable to seniority and/or merit, and (d) the assumption that benefits will increase 4.5% per year after retirement.

**MOSERS**

(Dollars in Thousands)

***Pension Benefit Obligation***

Retirees and beneficiaries currently receiving benefits	\$ 587,489
Terminated employees not yet receiving benefits	67,267
<i>Current Employees:</i>	
Accumulated employee contributions including allocated investment income	465
Employer financed — vested	971,125
Employer financed — nonvested	112,063
Total Pension Benefit Obligation	1,738,409
Net assets available for benefits, at cost (Market Value \$1,812,770)	1,735,463
Unfunded Pension Benefit Obligation	<u>\$ 2,946</u>

During the year ended June 30, 1991, the MOSERS plan experienced a net increase of \$172,092 thousand dollars in the Pension Benefit Obligation. Of that change, a decrease of \$6,623 thousand dollars was attributable to a change in assumptions used in the determination of this value.

**ALJRS**

(Dollars in Thousands)

***Pension Benefit Obligation***

Retirees and beneficiaries currently receiving benefits	\$ 3,587
Terminated employees not yet receiving benefits	168
<i>Current employees:</i>	
Accumulated employee contributions including allocated investment income	0
Employer financed — vested	3,185
Employer financed — nonvested	0
Total Pension Benefit Obligation	6,940
Net assets available for benefits, at cost (Market Value \$4,769)	4,567
Unfunded Pension Benefit Obligation	<u>\$ 2,373</u>

During the year ended June 30, 1991, the ALJRS plan experienced a net increase of \$835 thousand dollars in the Pension Benefit Obligation.

**(4) Funding Policy**

MOSERS and ALJRS are pension plans covering substantially all State of Missouri employees and administrative law judges and legal advisors of the Division of Workers' Compensation. The State of Missouri is obligated by State law to make all required contributions to the plans. The required contributions are expressed as a level percentage of covered payroll and are actuarially determined using an individual entry-age actuarial cost method. The prior service costs are amortized over 40 years. Significant actuarial assumptions used to compute actuarially determined contribution requirements are the same as those used to compute the Pension Benefit Obligation.

**MOSERS** — With the exception of fiscal years beginning in 1989, contributions were made in accordance with actuarially determined requirements. Beginning in fiscal year 1989, the rate is statutorily set at 9.9%. This rate remains in effect unless revenues do not exceed expenses by 375% in any one year or until fiscal year 1993. Revenues did not exceed expenses by 375% in fiscal year 1991; however, the actuarially determined contribution rate is already scheduled to go into effect for fiscal year 1993 and the actuarial contribution rate of 9.65% is being appropriated for fiscal year 1992.

**Fiscal Year 1991 Contributions**

<u>Required Contributions</u>		<u>Contributions Made</u>	
<u>Amount</u>	<u>Covered Payroll Percentage</u>	<u>Amount</u>	<u>Covered Payroll Percentage</u>
\$118,907,088	11.57%	\$102,854,950	10.01%

**ALJRS** — Contributions were made in accordance with actuarially determined requirements.

**Fiscal Year 1991 Contributions**

<u>Required Contributions</u>		<u>Contributions Made</u>	
<u>Amount</u>	<u>Covered Payroll Percentage</u>	<u>Amount</u>	<u>Covered Payroll Percentage</u>
\$516,234	26.61%	\$527,648	27.22%

Historical trend information on the funding of the pension plans can be found in the Required Supplementary Information on pages 35 and 36.

**Missouri State Insurance Plan**

The Missouri State Insurance Plan is funded through both employer and employee contributions. Employer contribution rates are statutorily determined as a fixed dollar amount per month per eligible employee. Employee contribution rates are established by the Board of Trustees based on projected claims experience and funding provided by employer contributions. State statutes provide that the employer contributions are to be used to provide for the employees' medical costs (and their dependents if appropriations are provided). The unreserved accumulated employee contribution deficit represents the negative balance arising from the employee premiums being less than needed to cover their dependent expenses and no appropriations were provided for dependent coverage. Contributions totaling \$67,839,638 were made to the Plan during the year ended June 30, 1991, in accordance with these requirements.

**(5) Other Post Employment Benefits (OPEB)**

In addition to the retirement benefits provided through MOSERS, the State of Missouri also funds, either partially or in its entirety, OPEB for eligible retirees.

**Retiree Life Insurance**

Retirees who retired on or after October 1, 1984, are eligible for \$5,000 of State-sponsored life insurance coverage if they retire directly from active employment. As of June 30, 1991, 2,855 retirees were eligible and participating in the program. The coverage is financed on a pay-as-you-go basis and is purchased as a group

policy through competitive bids at a current cost of \$9.65 per month per eligible participant (\$304,042 for the year ended June 30, 1991). Premiums are paid entirely by the State as provided for by Section 104.515 of the Missouri Statutes.

### **Retiree Medical Insurance**

Retirees who had State-sponsored medical insurance coverage for at least two years (or since first eligible) prior to retirement may continue coverage into retirement. As of June 30, 1991, 4,921 of a total of 5,452 eligible retirees were participating in the program. The employer contributions are financed on a pay-as-you-go basis and are included in the state contributions of the Internal Service Fund. Excess assets of the Internal Service Fund are set aside and provide a necessary cushion for fluctuations in medical claim expenses. As of June 30, 1991, net assets totalling \$7,046,201 were available for both active and retired member future claims. The State contributed \$9.00 per month per eligible participant (\$522,846 for the year ended June 30, 1991) towards their coverage as provided for by Section 104.515 of the Missouri Statutes. The retiree is responsible for payment of the balance required for his/her coverage and his/her dependent's coverage. Retiree claim expenses net of retiree contributions have been estimated by the system's management at approximately \$1,000,000 for the year ended June 30, 1991.

### **(6) Plan Termination**

MOSERS and its related plans are administered in accordance with Missouri statutes. The statutes do not provide for termination of the plans under any circumstances.

### **(7) Required Supplementary Information**

Ten-year historical trend information designed to provide information about MOSERS and its related plans' progress made in accumulating sufficient assets to pay benefits when due is presented on pages 35 and 36 as Required Supplementary Information. Certain required information is not available for the full ten years, and is noted as such.

The comparability of trend information is affected by changes in actuarial assumptions, benefit provisions, actuarial funding methods, accounting policies, and other changes. Those changes usually affect trends in contribution requirements and ratios that use the pension benefit obligation as a factor.

Looking at the pension benefit obligation, or the unfunded portion (or the assets in excess) of the pension benefit obligation, in isolation can be misleading. Expressing net assets available for benefits as a percentage of the pension benefit obligation provides one indication of the extent to which a public employees' retirement system (PERS) is funded. Analysis of this percentage over time indicates whether the PERS is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the PERS. Expressing the unfunded pension benefit obligation (or assets in excess of the pension benefit obligation) as a percentage of the annual covered payroll approximately adjusts for the effects of inflation and aids analysis of funding progress. Generally, the smaller the unfunded percentage, the stronger the PERS.

The following is a list of significant changes which have occurred during the ten years presented, and should be considered when reviewing the data.

**1983** — The actuarial valuation performed to determine the required contribution rate for fiscal year 1985 had the following significant changes expressed in both the dollar impact and the effect on the percentage of payroll:



	<u>Amount</u>	<u>% of Payroll</u>
Refinement of the funding method application	\$ (5,417,672)	(1.9)%
Actuarial gains	(1,181,084)	(.3)
Increase in covered payroll	(2,403,795)	(.4)

**1984** — The actuarial valuation performed to determine the required contribution rate for fiscal year 1986 had the following significant changes:

	<u>Amount</u>	<u>% of Payroll</u>
Increase due to benefit changes	\$ 7,550,582	1.4%

**1986** — The actuarial valuation performed to determine the required contribution rate for fiscal year 1988 had the following significant changes:

	<u>Amount</u>	<u>% of Payroll</u>
Funding of previously "pay-as-you-go" benefits	\$ 9,610,413	1.46%
Raising the cap on cost-of-living adjustments from 50% to 65% of the initial benefit	3,869,725	.63
Providing normal retirement at age 55 with 30 years of service	1,267,139	.20

**1988** — Legislation enacted setting the retirement contribution rate at 9.9% for fiscal years 1990 through 1993 unless total revenues (excluding unrealized appreciation of investments) is less than 375% of total expenses in any one year. The Board of Trustees voted to adopt the 9.9% beginning with fiscal year 1989. During 1988, MOSERS received approximately 2,700 members transferring from the Public School Retirement System and approximately 540 members transferring from the Lincoln University Employee Retirement System.

**1989** — MOSERS total revenues were less than 375% of total expenses for the fiscal year ended June 30, 1989. The Board of Trustees voted to keep the retirement contribution rate set at 9.9% through fiscal year 1993. During 1989, approximately 120 members transferred from the Public School Retirement System to MOSERS.

**1990** — The Board of Trustees approved a change in the actuarial rate of return assumption from 8% to 8.5% beginning with the valuation as of June 30, 1990.

<b>MOSERS</b>	<u>Amount</u>	<u>% of Payroll</u>
Change in assumptions	\$ (16,205,924)	(1.63)%
Other experience and non-recurring items	(2,883,263)	(.29)
<b>ALJRS</b>		
Change in assumptions	(42,277)	(2.21)
Other experience and non-recurring items	21,234	1.11

**1991** — The actuarial valuation as of June 30, 1991, reflected the following changes to the computed contribution rates for fiscal year 1993.

<b>MOSERS</b>	<u>Amount</u>	<u>% of Payroll</u>
Change in benefits	\$ 719,403	.07%
Other experience and non-recurring items	(411,088)	(.04)
<b>ALJRS</b>		
Other experience and non-recurring items	43,849	2.26

## Required Supplementary Information

Ten Years Ended June 30, 1991

### MOSERS' Valuation (Dollars in Thousands)

Valuation Date	Pension Benefit Obligation PBO	Net Assets at Cost	Assets as a % of PBO	Unfunded (Assets in Excess of) Pension Benefit Obligation UFPBO	Active Member Payroll	UFPBO as a % of Active Member Payroll
June 30, 1991	\$ 1,738,409	\$ 1,735,463	99.8%	\$ 2,946	\$ 1,027,719	0.3%
June 30, 1990	1,566,317	1,568,849	100.2	(2,532)	994,228	(0.3)
June 30, 1989	1,510,976	1,370,144	90.7	140,832	895,170	15.7
June 30, 1988	1,266,733	1,214,006	95.8	52,727	824,486	6.4
June 30, 1987	982,736	1,053,361	107.2	(70,625)	692,363	(10.2)

Information prior to June 30, 1987, is not available.

### ALJRS' Valuation (Dollars in Thousands)

Valuation Date	Pension Benefit Obligation PBO	Net Assets at Cost	Assets as a % of PBO	Unfunded Pension Benefit Obligation UFPBO	Active Member Payroll	UFPBO as a % of Active Member Payroll
June 30, 1991	\$ 6,940	\$ 4,567	65.8%	\$ 2,373	\$ 1,940	122.3%
June 30, 1990	6,105	4,055	66.4	2,050	1,913	107.2
June 30, 1989	6,223	3,243	52.1	2,980	1,870	159.4
June 30, 1988	5,211	2,632	50.5	2,579	1,408	183.2
June 30, 1987	4,086	2,278	55.8	1,808	1,418	127.5

Information prior to June 30, 1987, is not available.

### MOSERS' Revenue By Source

Fiscal Year	Employer Contribution Rate	Employer Contribution Amount	Employer Contributions Service Transfers	Member Payments for Military Service Credit	State Reimbursements for Nonfunded Benefits	Investment Income	Other	Total
1991	9.9000%	\$ 102,854,950	\$ 8,459,034	\$ 446,286	\$ 6,572,690	\$ 123,538,791	\$ 9,569	\$ 241,881,320
1990	9.9000	98,135,838	770,697	715,433	5,838,700	161,877,087	204,872	267,542,627
1989	9.9000	89,177,022	4,274,011	376,701	5,549,696	117,968,268	20,901	217,366,599
1988	12.1031	96,412,071	52,223,619	596,649	9,084,452	52,057,522	26,469	210,400,782
1987	10.0000	71,969,009	0	143,670	15,238,962	185,051,476	(43,198)	272,359,919
1986	11.3328	71,972,655	0	0	11,059,943	129,568,053	(10,051)	212,590,600
1985	10.5167	58,295,102	0	0	9,845,857	70,642,944	(802,437)	137,981,466
1984	13.1000	67,753,003	0	0	8,323,040	48,045,669	53	124,121,765
1983	12.0000	57,166,556	0	0	7,779,495	58,007,997	716	122,954,764
1982	9.5000	42,448,992	0	0	8,781,407	11,125,102	65	62,355,566

## Required Supplementary Information

Ten Years Ended June 30, 1991

### MOSERS' Expenses By Type

Fiscal Year	Benefits	Contribution Refunds	Administrative	Total
1991	\$ 67,369,539	\$ 19,297	\$ 7,878,127	\$ 75,266,963
1990	60,559,008	11,169	8,267,790	68,837,967
1989	53,711,546	4,298	7,512,434	61,228,278
1988	43,431,100	25,889	6,299,182	49,756,171
1987	37,881,039	43,549	7,059,516	44,984,104
1986	30,832,582	473,921	5,584,410	36,890,913
1985	27,093,057	82,333	3,365,898	30,541,288
1984	23,450,927	141,315	2,513,718	26,105,960
1983	20,735,516	202,715	2,002,860	22,941,091
1982	18,038,756	1,806,642	755,814	20,601,212

### ALJRS' Revenues By Source

Fiscal Year	Employer Contribution Rate	Employer Contribution Amount	Funds Transfer from MOSERS	Investment Income	Other	Total
1991	26.6100%	\$ 527,648	\$ 0	\$ 322,038	\$ 25	\$ 849,711
1990	30.1700	605,577	0	418,395	530	1,024,502
1989	24.9800	513,199	0	279,364	78	792,641
1988	24.9800	359,066	0	112,845	105	472,016
1987	24.9800	346,596	0	384,409	(89)	730,916
1986	24.9800	255,229	0	246,517	(19)	501,727
1985	18.3733	152,743	802,440	141,569	1	1,096,753

Plan established in fiscal year 1985.

### ALJRS' Expenses By Type

Fiscal Year	Benefits	Administrative	Total
1991	\$ 317,374	\$ 20,537	\$ 337,911
1990	191,534	21,369	212,903
1989	163,327	17,819	181,146
1988	104,757	13,412	118,169
1987	52,983	14,665	67,648
1986	11,412	10,624	22,036
1985	0	6,746	6,746

Plan established in fiscal year 1985.

# Missouri State Employees' Retirement System Combining Balance Sheet – Pension Trust Funds

June 30, 1991

	MOSERS	ALJRS	Total
<b>ASSETS</b>			
Contributions Receivable	\$ 8,973,886	\$ 42,868	\$ 9,016,754
Accrued Interest and Dividends	14,386,631	37,697	14,424,328
Accounts Receivable – Securities Sold	12,490,948	32,730	12,523,678
Accounts Receivable – Other	238,079	624	238,703
Investments, at Cost	1,945,816,836	5,098,549	1,950,915,385
Office Building, Equipment and Fixtures Net of Accumulated Depreciation	2,977,785	7,803	2,985,588
<b>Total Assets</b>	<b>\$ 1,984,884,165</b>	<b>\$ 5,220,271</b>	<b>\$ 1,990,104,436</b>
<b>LIABILITIES AND FUND BALANCES</b>			
<b>Liabilities:</b>			
Accounts Payable – Securities Purchased	\$ 21,468,037	\$ 56,252	\$ 21,524,289
Collateral for Securities on Loan	215,110,369	563,645	215,674,014
Other	12,842,477	33,651	12,876,128
<b>Total Liabilities</b>	<b>249,420,883</b>	<b>653,548</b>	<b>250,074,431</b>
<b>Fund Balances:</b>			
<b>Reserved for Employee Retirement Benefits:</b>			
Member Contributions – MOSERS	465,307	0	465,307
State Contributions – MOSERS	1,734,997,975	0	1,734,997,975
State Contributions – ALJRS	0	4,566,723	4,566,723
<b>Total Fund Balances</b>	<b>1,735,463,282</b>	<b>4,566,723</b>	<b>1,740,030,005</b>
<b>Total Liabilities and Fund Balances</b>	<b>\$ 1,984,884,165</b>	<b>\$ 5,220,271</b>	<b>\$ 1,990,104,436</b>

See accompanying Independent Auditors' Report.

**Missouri State Employees' Retirement System  
Combining Statement of Revenues, Expenses,  
and Changes in Fund Balance – Pension Trust Funds**

Year Ended June 30, 1991

	<b>MOSERS</b>	<b>ALJRS</b>	<b>Total</b>
<b>OPERATING REVENUES</b>			
State Contributions	\$ 111,313,984	\$ 527,648	\$ 111,841,632
Payments for Military Service Credit	446,286	0	446,286
State Reimbursements	6,572,690	0	6,572,690
Investment Income	123,538,791	322,038	123,860,829
Miscellaneous Income	9,569	25	9,594
Total Operating Revenues	241,881,320	849,711	242,731,031
<b>OPERATING EXPENSES</b>			
Retirement Benefits	64,143,098	317,374	64,460,472
Disability Benefits	659,961	0	659,961
Survivors' Benefits	2,566,480	0	2,566,480
Contribution Refunds	19,297	0	19,297
Administrative	7,878,127	20,537	7,898,664
Total Operating Expenses	75,266,963	337,911	75,604,874
Operating Revenues Over Expenses	166,614,357	511,800	167,126,157
Fund Balance July 1, 1990	1,568,848,925	4,054,923	1,572,903,848
Fund Balance June 30, 1991	\$ 1,735,463,282	\$ 4,566,723	\$ 1,740,030,005

See accompanying Independent Auditors' Report.

# Missouri State Employees' Retirement System

## Combining Statement of Cash Flows – Pension Trust Funds

Year Ended June 30, 1991

	MOSERS	ALJRS	Total
<b>Cash flows from operating activities:</b>			
Cash received from employer and members	\$ 112,050,536	\$ 534,248	\$ 112,584,784
Cash reimbursements from state	6,472,788	32,398	6,505,186
Other miscellaneous income	9,556	48	9,604
Cash benefit payments	(67,373,739)	(317,374)	(67,691,113)
Cash payment for contribution refunds	(19,959)	0	(19,959)
Cash payment to employees for services	(1,163,154)	(5,822)	(1,168,976)
Cash payment to other suppliers of goods and services	(7,158,783)	(35,831)	(7,194,614)
Cash received from investment income	119,806,727	613,051	120,419,778
Net cash provided by operating activities	162,623,972	820,718	163,444,690
<b>Cash flows from capital and related financing activities:</b>			
Sale of fixed assets	749	4	753
Purchase of fixed assets	(1,525,539)	(7,636)	(1,533,175)
Net cash used for capital and related financing activities	(1,524,790)	(7,632)	(1,532,422)
<b>Cash flows from investing activities:</b>			
Purchase of investment securities	(4,228,761,432)	(21,165,989)	(4,249,927,421)
Cash disbursed for securities lending	(2,892,964,713)	(14,479,998)	(2,907,444,711)
Proceeds from sale and maturities of investment securities	3,956,454,510	19,803,026	3,976,257,536
Cash received from securities lending	3,001,206,252	15,021,774	3,016,228,026
Net cash used in investing activities	(164,065,383)	(821,187)	(164,886,570)
Net decrease in cash	(2,966,201)	(8,101)	(2,974,302)
Cash at beginning of year	(6,657,391)	(17,114)	(6,674,505)
Cash at end of year	\$ (9,623,592)	\$ (25,215)	\$ (9,648,807)
<b>Reconciliation of operating revenues over expenses to net cash provided by operating activities:</b>			
Operating revenues over expenses	\$ 166,614,357	\$ 511,800	\$ 167,126,157
Adjustments to reconcile operating revenues over expenses to net cash provided by operating activities:			
Depreciation	97,676	489	98,165
Change in assets and liabilities:			
(Increase)decrease in operational accounts receivable	(3,608,920)	310,827	(3,298,093)
Decrease in operational accounts payable	(479,141)	(2,398)	(481,539)
Total adjustments	(3,990,385)	308,918	(3,681,467)
Net cash provided by operating activities	\$ 162,623,972	\$ 820,718	\$ 163,444,690

See accompanying Independent Auditors' Report.

## Missouri State Employees' Retirement System Schedule of Administrative Expenses

Year Ended June 30, 1991

	<u>Fiduciary Fund Type – Pension Trusts</u>			<u>Proprietary Fund Type Internal Service</u>
	<u>MOSERS</u>	<u>ALJRS</u>	<u>Total</u>	
<b>PERSONAL SERVICE</b>				
Salaries	\$ 857,430	\$ 2,235	\$ 859,665	\$ 944,308
Employee Fringe Benefits	202,267	527	202,794	230,308
Total Personal Service	1,059,697	2,762	1,062,459	1,174,616
<b>PROFESSIONAL SERVICES</b>				
Investment Services	5,559,758	14,492	5,574,250	26,146
Actuarial Services	129,562	338	129,900	165,034
Attorney Services	427,367	1,114	428,481	49,356
Auditing Services	61,291	160	61,451	63,268
Physical Examinations	3,396	9	3,405	0
Imaging Systems Support	0	0	0	45,000
Claims Administrative Services	0	0	0	3,658,901
Total Professional Services	6,181,374	16,113	6,197,487	4,007,705
<b>COMMUNICATIONS</b>				
Postage and Mailing	114,382	298	114,680	109,385
Telephone	10,236	27	10,263	44,008
Printing	49,559	129	49,688	98,785
Total Communications	174,177	454	174,631	252,178
<b>BUILDING AND GROUNDS</b>				
Depreciation	29,789	78	29,867	0
Utilities	21,214	55	21,269	26,251
Maintenance	21,849	57	21,906	62,322
Rent	0	0	0	43,696
Total Building and Grounds	72,852	190	73,042	132,269
<b>EQUIPMENT</b>				
Depreciation	68,120	178	68,298	0
Maintenance	43,204	113	43,317	81,607
Rental	113,309	295	113,604	239
Reimbursed Shared Expenses	(49,128)	(128)	(49,256)	49,256
Loss on Sale of Equipment	4,423	12	4,435	0
Total Equipment	179,928	470	180,398	131,102
<b>TRAVEL AND MEETINGS</b>				
Board Travel and Meetings	15,108	39	15,147	145
Staff Meals and Travel	62,293	162	62,455	30,628
State Car	2,579	7	2,586	450
Total Travel and Meetings	79,980	208	80,188	31,223
<b>GENERAL</b>				
Educational Materials	7,034	18	7,052	502
Office Supplies	103,037	269	103,306	83,538
Subscriptions and Dues	12,097	32	12,129	318
Miscellaneous	7,951	21	7,972	973
Total General	130,119	340	130,459	85,331
Total Administrative Expenses	\$ 7,878,127	\$ 20,537	\$ 7,898,664	\$ 5,814,424

See accompanying Independent Auditors' Report.



**Missouri State Employees' Retirement System**  
**Internal Service Fund**  
**Ten-Year Historical Data**  
 Ten Years Ended June 30, 1991

**Revenues By Source**

<b>Fiscal Years</b>	<b>State Contributions</b>	<b>Member Contributions</b>	<b>Investment Income</b>	<b>Other</b>	<b>Total</b>
1991	\$ 48,641,390	\$ 16,954,753	\$ 2,191,155	\$ 26,469,021	\$ 94,256,319
1990	46,378,087	15,658,445	1,927,530	27,958,837	91,922,899
1989	45,111,161	15,548,221	898,264	23,238,515	84,796,161
1988	33,613,800	14,744,801	791,492	18,072,125	67,222,218
1987	26,841,381	13,697,408	1,180,017	14,743,260	56,462,066
1986	25,692,367	13,269,215	1,171,325	9,465,907	49,598,814
1985	24,407,725	11,637,144	1,262,153	3,757,028	41,064,050
1984	27,278,189	12,523,067	730,179	2,136,413	42,667,848
1983	20,125,221	10,367,535	643,710	804,458	31,940,924
1982	13,835,468	10,435,639	1,259,285	136,083	25,666,475

**Expenses By Type**

<b>Fiscal Years</b>	<b>Medical Claims</b>	<b>Administrative</b>	<b>Other</b>	<b>Total</b>
1991	\$ 67,969,017	\$ 5,814,424	\$ 27,179,477	\$100,962,918
1990	49,407,467	4,933,409	27,743,836	82,084,712
1989	50,881,898	2,985,644	23,122,807	76,990,349
1988	54,210,305	3,279,229	17,471,794	74,961,328
1987	41,705,334	2,725,664	14,046,802	58,477,800
1986	41,637,796	1,688,469	9,327,275	52,653,540
1985	32,380,372	1,341,813	4,034,152	37,756,337
1984	30,336,073	1,280,426	2,402,108	34,018,607
1983	34,235,254	1,138,745	1,139,458	36,513,457
1982	27,111,914	1,060,485	487,083	28,659,482

See accompanying Independent Auditors' Report.

## MOSERS Investment Summary

Year Ended June 30, 1991

	July 1, 1990				June 30, 1991		
Type of Investment	Book Value	Market Value	Purchases	Sales and Redemptions	Book Value	Market Value	% Total Market
Fixed Income:							
Treasury Bonds, Notes and Bills	\$ 329,662,810	\$ 335,650,378	\$ 209,202,383	\$ 211,157,574	\$ 327,707,619	\$ 344,083,770	17.02%
Government Bonds	112,143,305	114,180,130	77,571,063	16,358,605	173,355,763	201,128,957	9.94
FHA Mortgages	2,790,781	2,841,469	35,242	545,955	2,280,068	2,253,615	0.11
VA Mortgages	18,921	19,265	0	7,560	11,361	13,857	0.00
Corporate Bonds	165,628,789	168,637,055	91,425,649	83,897,625	173,156,813	147,012,111	7.27
Convertible Bonds	5,289,840	5,385,918	10,061,688	4,353,968	10,997,560	10,602,718	0.52
Guaranteed Investment Contracts	9,248,791	9,416,774	2,406,204	480,269	11,174,726	11,174,726	0.55
Total Fixed Income	624,783,237	636,130,989	390,702,229	316,801,556	698,683,910	716,269,754	35.41
Common Stocks	684,994,433	777,495,797	773,252,081	675,660,188	782,586,326	852,090,148	42.13
Preferred Stocks	1,615,583	1,609,867	17,774,230	3,539,686	15,850,127	15,263,575	0.75
Real Estate:							
Loans and Mortgages	23,389,961	24,362,370	0	1,260,355	22,129,606	23,945,941	1.18
Equity Holdings	84,582,034	79,730,031	1,372,672	12,597	85,942,109	76,094,641	3.76
Total Real Estate	107,971,995	104,092,401	1,372,672	1,272,952	108,071,715	100,040,582	4.94
Venture Capital:							
Limited Partnerships	31,712,361	31,080,890	6,792,122	6,293,723	32,210,760	31,045,283	1.53
Short-Term Investments	196,069,587	196,045,855	2,669,087,542	2,588,304,558	276,852,571	276,852,570	13.68
Repurchase Agreements	32,464,719	32,496,561	346,678,622	347,581,914	31,561,427	31,561,428	1.56
Total Investments	\$1,679,611,915	\$1,778,952,360	\$4,205,659,498	\$3,939,454,577	\$1,945,816,836	\$2,023,123,340	100.00%

See accompanying Independent Auditors' Report.

Note: Due to space limitations and printing costs, a detailed listing of the investment holdings and transactions could not be provided in this annual report; however, the detailed reports are available for review as an appendix to this report at the MOSERS office.

**ALJRS**  
**Investment Summary**  
Year Ended June 30, 1991

Type of Investment	July 1, 1990				June 30, 1991		% Total Market
	Book Value	Market Value	Purchases	Sales and Redemptions	Book Value	Market Value	
Fixed Income:							
Treasury Bonds, Notes and Bills	\$ 936,509	\$ 862,858	\$ 8,327,613	\$ 8,405,442	\$ 858,680	\$ 901,589	17.02%
Government Bonds	318,578	293,524	171,914	36,254	454,238	527,010	9.94
FHA Mortgages	7,928	7,305	135	2,089	5,974	5,905	0.11
VA Mortgages	54	50	0	24	30	36	0.00
Corporate Bonds	470,520	433,516	187,271	204,074	453,717	385,210	7.27
Convertible Bonds	15,027	13,845	24,308	10,519	28,816	27,782	0.52
Guaranteed Investment Contracts	26,274	24,208	3,756	750	29,280	29,281	0.55
Total Fixed Income	1,774,890	1,635,305	8,714,997	8,659,152	1,830,735	1,876,813	35.41
Common Stocks	1,611,736	1,998,712	3,477,105	3,038,261	2,050,580	2,232,699	42.13
Preferred Stocks	56	4,138	51,789	10,314	41,531	39,995	0.75
Real Estate:							
Loans and Mortgages	49,488	62,629	8,497	0	57,985	62,745	1.18
Equity Holdings	204,379	204,962	21,005	193	225,191	199,388	3.76
Total Real Estate	253,867	267,591	29,502	193	283,176	262,133	4.94
Venture Capital:							
Limited Partnerships	81,612	79,900	38,000	35,211	84,401	81,347	1.53
Short-Term Investments	480,244	503,976	8,100,872	7,855,690	725,426	725,426	13.68
Repurchase Agreements	115,381	83,539	12,543,113	12,575,794	82,700	82,699	1.56
Total Investments	\$ 4,317,786	\$ 4,573,161	\$ 32,955,378	\$ 32,174,615	\$ 5,098,549	\$ 5,301,112	100.00%

See accompanying Independent Auditors' Report.

Note: Due to space limitations and printing costs, a detailed listing of the investment holdings and transactions could not be provided in this annual report; however, the detailed reports are available for review as an appendix to this report at the MOSERS office.

# **Internal Service Fund Investment Summary**

Year Ended June 30, 1991

Type of Investment	July 1, 1990				June 30, 1991		% Total Market
	Book Value	Market Value	Purchases	Sales and Redemptions	Book Value	Market Value	
Fixed Income							
Treasury Bonds, Notes, Bills	\$ 16,656,520	\$ 16,493,438	\$ 8,005,594	\$ 2,823,875	\$ 21,838,239	\$ 22,252,952	91.14%
Government Bonds	502,187	497,345	0	502,187	0	0	0.00
Corporate Bonds	497,620	488,575	0	497,620	0	0	0.00
Total Fixed Income	17,656,327	17,479,358	8,005,594	3,823,682	21,838,239	22,252,952	91.14
Short-Term Investments	7,596,239	7,596,239	97,457,933	102,891,494	2,162,678	2,162,678	8.86
Total Investments	\$ 25,252,566	\$ 25,075,597	\$105,463,527	\$106,715,176	\$ 24,000,917	\$ 24,415,630	100.00%

See accompanying Independent Auditors' Report.

Note: Due to space limitations and printing costs, a detailed listing of the investment holdings and transactions could not be provided in this annual report; however, the detailed reports are available for review as an appendix to this report at the MOSERS office.

**Pension Trust Funds**  
**Schedule of Ten Largest Investment Holdings**  
 June 30, 1991

Shares	Description	Cost	Market	% of Total Invested Market
290,800	Philip Morris Companies Inc. Common	\$ 11,525,010	\$ 18,465,800	1.02%
318,300	Morgan J. P. & Co. Common	12,621,679	16,591,388	0.92
168,200	International Business Machines Corp. Common	19,180,212	16,336,425	0.91
194,600	Bristol Myers Squibb Co. Common	10,969,891	15,130,150	0.84
319,100	K-Mart Corp. Common	11,945,167	14,439,275	0.80
222,300	Texaco Inc. Common	11,250,659	13,365,788	0.74
194,600	Mobil Corp. Common	10,124,030	12,503,050	0.69
130,900	Royal Dutch Petroleum Co. New York Registry	10,450,726	10,144,750	0.56
84,200	Merck & Co. Inc. Common	8,179,591	9,777,725	0.54
161,500	American Home Products Corp. Common	6,889,627	9,629,438	0.53
Totals		<u>\$ 113,136,592</u>	<u>\$ 136,383,789</u>	<u>7.55%</u>

**Schedule of Investment Service Fees**

Year Ended June 30, 1991

	Fiduciary Fund Type Pension Trusts	Proprietary Fund Type Internal Service	Total (Memorandum Only)
Investment Advisors' Fees			
Fixed Income Managers	\$ 1,053,071	\$ 26,146	\$ 1,079,217
Equity Managers	3,114,757	0	3,114,757
Real Estate Managers	112,725	0	112,725
Venture Capital Managers	271,329	0	271,329
Total Investment Managers' Fees	<u>4,551,882</u>	<u>26,146</u>	<u>4,578,028</u>
Other Investment Service Fees			
Custodian Fees	783,125	0	783,125
Security Lending Fees	151,082	0	151,082
Investment Consultant	88,161	0	88,161
Total Investment Service Fees	<u>\$ 5,574,250</u>	<u>\$ 26,146</u>	<u>\$ 5,600,396</u>

See accompanying Independent Auditors' Report.

## Pension Trust Funds

### Schedule of Brokerage Commissions Paid

Year Ended June 30, 1991

(Unaudited)

Brokerage Firms	Number of Transactions	Number of Shares	Commissions Paid	Commissions Per Share
Shearson/American Express	391	5,413,200	\$ 317,845	\$ 0.059
Merrill Lynch Pierce Fenner	907	4,488,770	195,621	0.044
Bridge Trading	494	2,193,444	137,464	0.063
Edwards (A.G.) & Sons, Inc.	96	1,724,366	111,702	0.065
Broadcourt Capital Corp.	525	1,475,878	99,722	0.068
Kidder, Peabody & Co., Inc.	120	1,047,300	64,888	0.062
Goldman Sachs & Co.	368	1,279,400	64,574	0.050
First Boston Corporation	376	1,112,300	61,304	0.055
Paine, Webber, Jackson & Co.	82	1,004,800	56,273	0.056
Prudential Bache Securities	60	940,300	56,010	0.060
Smith Barney Harris Upham	67	836,600	49,197	0.059
Stifel, Nicolaus & Co.	43	690,330	43,822	0.063
Morgan Stanley & Co., Inc.	105	749,993	40,282	0.054
Lawrence, C. J., Inc.	81	551,100	33,096	0.060
Witter (Dean) Reynolds, Inc.	45	462,000	30,400	0.066
Instinet	691	2,555,500	30,307	0.012
Bear, Stearns & Co.	28	499,700	30,153	0.060
Lewco Securities	55	334,500	20,620	0.062
Bernstein (Sanford) & Co.	35	336,200	20,352	0.061
Sutro & Co., Inc.	213	332,100	19,926	0.060
George K. Baum	20	270,200	18,327	0.068
Donaldson, Lufkin & Jenre	27	296,600	17,796	0.060
Warburg-Roe Pittman Akroy	44	306,115	17,242	0.056
Wilshire Associates - NSCC	19	283,400	17,224	0.061
Brown (Alex.) & Sons	92	284,000	14,832	0.052
Charlette Cohen & Co.	18	241,100	14,466	0.060
Autranet, Inc.	17	230,400	13,824	0.060
Nomura Securities International	33	219,700	13,182	0.060
Clearing Securities Of America	16	215,800	12,948	0.060
Legg Mason Wood Walker, Inc.	21	215,500	12,930	0.060
Oppenheimer & Co., Inc.	14	175,200	11,014	0.063
Piper, Jaffray & Hopwood	7	181,000	10,670	0.059
Rochdale Securities Corp.	22	177,300	10,638	0.060
Montgomery Securities	22	342,000	10,260	0.030
Cowen & Co.	70	294,900	10,181	0.035
Ameritrade, Inc.	9	161,300	9,678	0.060
Alpha Management	12	141,400	8,484	0.060
Salomon Brothers, Inc.	29	469,750	7,994	0.017
Rauscher Pierce Refsnes	4	121,400	7,284	0.060
County Securities Corp.	10	190,270	6,934	0.036
Chicago Corporation (The)	2	112,000	6,820	0.061
Marks (Carl) & Co., Inc.	8	108,200	6,492	0.060
Wagner, Stott & Co.	4	98,500	6,210	0.063
Dominion Securities/Ames	3	84,800	5,088	0.060
Others	271	5,272,917	81,101	0.015
<b>Totals</b>	<b>5,576</b>	<b>38,521,533</b>	<b>\$ 1,835,177</b>	<b>\$ 0.048</b>

See accompanying Independent Auditors' Report.

# Actuarial Section

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## Actuary's Certification Letter

GABRIEL, ROEDER, SMITH & COMPANY

Actuaries & Consultants

200 Globe Building • 407 East Fort • Detroit, Michigan 48226 • 313-961-3346

September 12, 1991

The Board of Trustees  
Missouri State Employees' Retirement System  
Jefferson City, MO 65101

The primary financial objective of MOSERS has been to establish a contribution rate which, expressed as a percent of active member payroll, will remain approximately level from generation to generation of Missouri citizens.

In order to determine MOSERS' present reserve position and a level contribution rate for the future, annual actuarial valuations are made. The latest completed actuarial valuation was based upon data and assumptions as of June 30, 1991. Details of our work are shown in our annual valuation report.

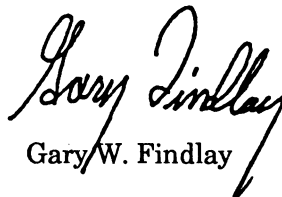
Assumptions concerning future financial experiences are needed for an actuarial valuation. These assumptions are established by the Board after consulting with the actuary. The assumptions remained unchanged from a year ago.

The level percent rate computed as of June 30, 1991, was 9.68% of payroll.

Level percent financing was interrupted by a state law enacted in 1988. For the four years beginning with fiscal year 1989 the employer contribution rate was set at 9.9% of payroll.

Results of the 1991 actuarial valuation indicated that actuarial accrued liabilities are approximately 87% covered by assets, a very strong reserve position.

Respectfully submitted,



Gary W. Findlay



Richard G. Roeder

## Summary of Actuarial Assumptions

June 30, 1991

### Economic Assumptions

1. The investment return rate used in the valuations was 8.5 percent per year, compounded annually (net after investment expenses). This assumption is used to make money payable at one point in time equal in value to a different amount of money payable at another point in time.
2. Pay increase assumptions for individual active members are shown for sample ages on page 51. Part of the assumption for each age is for merit and/or seniority increase, and the other 5.0 percent is for recognized wage inflation. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.
3. The active member payroll is assumed to increase 5.0 percent annually, which is the portion of the individual pay increase assumptions attributable to inflation.
4. The number of active members is assumed to continue at the present number.
5. Assets were valued using a three-year moving average market value method.

### Non-economic Assumptions

6. The mortality table, for post-retirement mortality, used in evaluating allowances to be paid was the Unisex Pension 1984 Mortality Table with no age adjustment for men and a six-year age setback for women. This assumption is used to measure probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement.
7. The probabilities of age and service retirement are shown on page 50.
8. The probabilities of withdrawal from service, disability, and death-in-service are shown for sample ages on page 51. For disability retirement, impaired longevity was recognized by basing benefit values on an adjusted age midway between attained age and normal retirement age.
9. An entry age normal actuarial cost method of valuation was used in determining liabilities and normal cost. Differences in the past between assumed experience and actual experience ("actuarial gains and losses") become part of actuarial accrued liabilities. Unfunded actuarial accrued liabilities are amortized to produce payments (principal and interest), which are level percent of payroll contributions.
10. Employer contribution dollars were assumed to be paid in equal installments throughout the employer fiscal year.
11. The data about persons now covered and about present assets were furnished by the System's administrative staff. Although examined for general reasonableness, the data were not audited by the Actuary.
12. The actuarial valuation computations were made by or under the supervision of a member of the American Academy of Actuaries (MAAA).

## Summary of Actuarial Assumptions

June 30, 1991

### Percent of Eligible Active Members Retiring Next Year

<b>MOSERS</b>			<b>ALJRS</b>		
<b>Retirement Ages</b>	<b>Percent</b>		<b>Retirement Ages</b>	<b>Percent</b>	
	<b>Men</b>	<b>Women</b>		<b>Men</b>	<b>Women</b>
55	2 %	2 %			
56	2	2			
57	2	2			
58	2	3			
59	2	4			
60	5	8	60	5 %	8 %
61	10	15	61	10	15
62	20	25	62	20	25
63	20	15	63	20	15
64	25	25	64	25	25
65	45	55	65	45	55
66	35	35	66	35	35
67	30	25	67	30	25
68	30	25	68	30	25
69	45	60	69	45	60
70 & Over	100	100	70 & Over	100	100

## Summary of Actuarial Assumptions

June 30, 1991

### Separations From Active Employment Before Service Retirement and Individual Pay Increase Assumptions

Sample Ages	Years of Service	Percent of Active Members Separating Within the Next Year						Pay Increase Assumptions For An Individual Employee		
		Withdrawal Men	Women	Death Men	Women	Disability Men	Women	Merit & Seniority	Base (Economy)	Increase Next Year
	0	30.0%	28.0%							
	1	18.0	16.0							
	2	15.0	13.0							
	3	12.0	10.0							
	4	10.0	8.0							
20	5+	10.0	8.0	.05%	.01%	.00%	.00%	3.0%	5.0%	8.0%
25		9.0	7.5	.07	.02	.01	.02	2.9	5.0	7.9
30		5.5	5.5	.09	.03	.02	.02	2.5	5.0	7.5
35		3.5	3.5	.19	.04	.04	.05	2.2	5.0	7.2
40		2.0	1.5	.25	.09	.07	.08	1.7	5.0	6.7
45		1.2	1.2	.36	.17	.13	.13	1.5	5.0	6.5
50		1.1	1.0	.70	.27	.25	.33	1.0	5.0	6.0
55		1.0	0.8	.79	.33	.58	.54	1.0	5.0	6.0
60		1.0	0.8	1.34	.54	.95	.65	1.0	5.0	6.0
65		1.0	0.5	1.88	.71	—	—	1.0	5.0	6.0

## Pension Trust Funds

### Summary of Member Data Included in Valuations

June 30, 1991

#### Active Members

Valuation Group	Number	Payroll	Group Averages		
			Salary	Age (yrs.)	Service (yrs.)
<b>MOSERS</b>					
Regular State Employees	41,121	\$ 854,924,536	\$ 20,790	41.4	9.3
Elected Officials	6	438,183	73,031	48.7	9.1
Legislative Clerks	83	1,167,947	14,072	40.5	5.9
Legislators	197	4,516,200	22,925	49.6	9.5
Uniformed Water Patrol	66	1,819,973	27,575	36.3	10.6
Conservation	1,293	33,520,062	25,924	39.6	11.7
Contract Employees	3,959	131,332,158	33,173	44.8	10.2
<b>Total MOSERS Group</b>	<b>46,725</b>	<b>\$1,027,719,059</b>	<b>\$ 21,995</b>	<b>41.6</b>	<b>9.4</b>
<b>ALJRS</b>	<b>34</b>	<b>\$ 1,940,201</b>	<b>\$ 57,065</b>	<b>47.8</b>	<b>7.7</b>
<b>NON-FUNDED JUDGES</b>	<b>346</b>	<b>\$ 25,742,372</b>	<b>\$ 74,400</b>	<b>51.6</b>	<b>10.7</b>

#### Retired Lives

Type of Benefit Payment	Number	Annual Benefits	Group Averages	
			Benefit	Age (yrs.)
<b>MOSERS</b>				
Retirement	10,928	\$ 60,522,792	\$ 5,538	72.5
Disability	203	605,112	2,981	57.4
Survivor of Active Member	475	1,415,472	2,980	61.9
Survivor of Retired Member	389	1,465,884	3,768	71.3
<b>Total MOSERS Group</b>	<b>11,995</b>	<b>\$ 64,009,260</b>	<b>\$ 5,336</b>	<b>71.8</b>
<b>ALJRS</b>	<b>13</b>	<b>\$ 341,664</b>	<b>\$ 26,282</b>	<b>71.8</b>
<b>NON-FUNDED JUDGES</b>	<b>299</b>	<b>\$ 6,919,968</b>	<b>\$ 23,144</b>	<b>74.6</b>

#### Others

<u>Terminated Vested Members</u>		<u>Members on Leave of Absence</u>		<u>Members on Long-Term Disability</u>	
<u>Group</u>	<u>Number</u>	<u>Group</u>	<u>Number</u>	<u>Group</u>	<u>Number</u>
MOSERS	6,555	MOSERS	476	MOSERS	479
ALJRS	4	ALJRS	0	ALJRS	0
NON-FUNDED JUDGES	51	NON-FUNDED JUDGES	0	NON-FUNDED JUDGES	0

**MOSERS**  
**Active Members by Attained Age and Service**  
 June 30, 1991

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	48	0	0	0	0	0	0	48	\$ 577,988
20-24	1,705	72	0	0	0	0	0	1,777	26,324,855
25-29	3,882	1,265	86	0	0	0	0	5,233	94,537,384
30-34	3,227	2,106	1,198	96	0	0	0	6,627	131,859,821
35-39	2,905	1,803	1,744	990	65	0	0	7,507	164,212,619
40-44	2,471	1,619	1,492	1,567	727	49	0	7,925	182,699,020
45-49	1,672	1,105	1,078	959	866	273	16	5,969	143,536,011
50-54	1,134	821	777	680	693	411	175	4,691	115,715,225
55-59	730	672	652	573	540	400	252	3,819	92,078,284
60	88	95	90	87	100	73	58	591	15,217,795
61	74	79	92	98	98	56	56	553	13,576,232
62	70	70	79	84	60	45	50	458	11,047,627
63	55	75	76	59	48	32	23	368	8,849,170
64	33	61	85	60	42	25	21	327	7,849,816
65	35	45	48	51	27	19	24	249	5,729,981
66	14	19	34	22	23	15	9	136	3,282,874
67	15	25	12	20	16	19	5	112	2,772,393
68	16	14	26	10	18	7	5	96	2,436,338
69	4	9	17	16	8	4	5	63	1,543,978
70 & Over	25	17	56	27	24	13	14	176	3,871,648
<b>Totals</b>	<b>18,203</b>	<b>9,972</b>	<b>7,642</b>	<b>5,399</b>	<b>3,355</b>	<b>1,441</b>	<b>713</b>	<b>46,725</b>	<b>\$ 1,027,719,059</b>

**Group Averages:**

Age            41.6 years  
 Service       9.4 years  
 Annual Pay    \$ 21,995

**ALJRS**  
**Active Members by Attained Age and Service**

June 30, 1991

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	0	0	0	0	0	0	0	0	\$ 0
20-24	0	0	0	0	0	0	0	0	0
25-29	1	0	0	0	0	0	0	1	50,340
30-34	3	0	0	0	0	0	0	3	148,864
35-39	6	2	0	0	0	0	0	8	463,112
40-44	3	3	0	0	0	0	0	6	355,024
45-49	0	0	1	1	0	0	0	2	110,948
50-54	2	0	1	1	0	0	0	4	229,714
55-59	1	0	1	0	0	0	0	2	101,703
60	0	0	0	0	1	0	0	1	63,933
61	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0
63	1	0	0	0	0	0	0	1	69,329
64	0	0	1	0	0	0	0	1	57,939
65	0	0	1	0	1	0	0	2	119,475
66	0	0	0	0	0	0	0	0	0
67	0	1	0	0	0	0	0	1	57,939
68	0	0	0	0	0	0	0	0	0
69	0	0	0	0	0	0	0	0	0
70 & Over	0	0	0	1	0	1	0	2	111,881
Totals	17	6	5	3	2	1	0	34	\$1,940,201

**Group Averages:**

Age            47.8 years  
Service        7.7 years  
Annual Pay    \$ 57,065

**MOSERS**  
**Retirees and Beneficiaries Added and Removed**  
 Ten Years Ended June 30, 1991

		<b>Beginning Balance</b>	<b>Additions</b>	<b>Deletions</b>	<b>Ending Balance</b>
<b>FY 91</b>	Retirees	10,700	898	467	11,131
	Beneficiaries	795	91	22	864
<b>FY 90</b>	Retirees	10,374	866	540	10,700
	Beneficiaries	720	102	27	795
<b>FY 89</b>	Retirees	9,961	966	553	10,374
	Beneficiaries	651	105	36	720
<b>FY 88</b>	Retirees	9,514	1,322	875	9,961
	Beneficiaries	576	96	21	651
<b>FY 87</b>	Retirees	9,133	749	368	9,514
	Beneficiaries	520	81	25	576
<b>FY 86</b>	Retirees	8,777	765	409	9,133
	Beneficiaries	477	60	17	520
<b>FY 85</b>	Retirees	8,463	692	378	8,777
	Beneficiaries	435	51	9	477
<b>FY 84</b>	Retirees	8,091	711	339	8,463
	Beneficiaries	394	57	16	435
<b>FY 83</b>	Retirees	7,688	761	358	8,091
	Beneficiaries	353	50	9	394
<b>FY 82</b>	Retirees	7,198	813	323	7,688
	Beneficiaries	312	55	14	353



**ALJRS**  
**Retirees and Beneficiaries Added and Removed**

Ten Years Ended June 30, 1991

		<u>Beginning Balance</u>	<u>Additions</u>	<u>Deletions</u>	<u>Ending Balance</u>
<b>FY 91</b>	Retirees	9	3	1	11
	Beneficiaries	0	2	0	2
<b>FY 90</b>	Retirees	7	2	0	9
	Beneficiaries	0	0	0	0
<b>FY 89</b>	Retirees	6	1	0	7
	Beneficiaries	0	0	0	0
<b>FY 88</b>	Retirees	3	3	0	6
	Beneficiaries	0	0	0	0
<b>FY 87</b>	Retirees	1	2	0	3
	Beneficiaries	0	0	0	0
<b>FY 86</b>	Retirees	0	1	0	1
	Beneficiaries	0	0	0	0

Plan established in fiscal year 1985.

**Judicial**  
**Retirees and Beneficiaries Added and Removed**

Ten Years Ended June 30, 1991

		<u>Beginning Balance</u>	<u>Additions</u>	<u>Deletions</u>	<u>Ending Balance</u>
<b>FY 91</b>	Retirees	164	23	10	177
	Beneficiaries	111	15	4	122
<b>FY 90</b>	Retirees	155	14	5	164
	Beneficiaries	108	6	3	111
<b>FY 89</b>	Retirees	153	16	14	155
	Beneficiaries	97	13	2	108
<b>FY 88</b>	Retirees	143	23	13	153
	Beneficiaries	88	11	2	97

Information prior to fiscal year 1988 is not available.

## Summary of Accrued and Unfunded Accrued Liabilities

Ten Years Ended June 30, 1991

### MOSERS

	(1)	(2)	(3)	(4)	(5)	(6)
Year Ended June 30	Actuarial Accrued Liabilities	Valuation Assets	Unfunded Actuarial Accrued Liabilities (1) - (2)	Valuation Payroll	Assets as % of Liabilities (2) / (1)	Unfunded Liabilities as % of Payroll (3) / (4)
1991	\$ 2,052,600,760	\$ 1,793,370,043	\$ 259,230,717	\$ 1,027,719,059	87.4%	25.2%
1990	1,861,365,216	1,587,114,827	274,250,389	994,228,494	85.3	27.6
1989	1,782,125,565	1,417,715,534	364,410,031	895,170,355	79.6	40.7
1988	1,569,242,030	1,255,558,874	313,683,156	824,486,280	80.0	38.0
1987	1,208,155,321	1,029,734,188	178,421,133	692,363,414	85.2	25.8

Information prior to fiscal year 1987 is not available.

### ALJRS

	(1)	(2)	(3)	(4)	(5)	(6)
Year Ended June 30	Actuarial Accrued Liabilities	Valuation Assets	Unfunded Actuarial Accrued Liabilities (1) - (2)	Valuation Payroll	Assets as % of Liabilities (2) / (1)	Unfunded Liabilities as % of Payroll (3) / (4)
1991	\$ 7,202,859	\$ 4,707,938	\$ 2,494,921	\$ 1,940,201	65.4%	128.6%
1990	6,333,743	4,093,598	2,240,145	1,912,986	64.6	117.1
1989	6,450,259	3,348,429	3,101,830	1,869,790	51.9	165.9
1988	5,383,168	2,723,051	2,660,117	1,407,692	50.6	189.0
1987	4,186,361	2,243,078	1,943,283	1,418,040	53.6	137.0

Information prior to fiscal year 1987 is not available.

## Short-Term Solvency Test

Ten Years Ended June 30, 1991

### MOSERS

Fiscal Year	Actuarial Accrued Liabilities for			Net Assets Available for Benefits	Percentage of Actuarial Liabilities Covered by Net Assets Available		
	Member Contributions	Current Retirees and Beneficiaries	Active and Inactive Members, Employer Financed Portion		(1)	(2)	(3)
	(1)	(2)	(3)				
1991	\$ 465,307	\$ 587,489,069	\$ 1,464,646,384	\$ 1,793,370,043	100.0%	100.0%	82.3%
1990	482,785	520,837,298	1,340,045,133	1,587,114,827	100.0	100.0	79.5
1989	492,278	492,128,269	1,289,505,018	1,417,715,534	100.0	100.0	71.7
1988	496,248	370,132,734	1,198,613,048	1,255,558,874	100.0	100.0	73.8
1987	498,712	332,745,597	874,911,012	1,029,734,188	100.0	100.0	79.6

Information prior to fiscal year 1987 is not available.

### ALJRS

Fiscal Year	Actuarial Accrued Liabilities for			Net Assets Available for Benefits	Percentage of Actuarial Liabilities Covered by Net Assets Available		
	Member Contributions	Current Retirees and Beneficiaries	Active and Inactive Members, Employer Financed Portion		(1)	(2)	(3)
	(1)	(2)	(3)				
1991	\$ 0	\$ 3,587,023	\$ 3,615,836	\$ 4,707,938	100.0%	100.0%	31.0%
1990	0	2,479,268	3,789,264	4,093,598	100.0	100.0	42.6
1989	0	2,109,119	4,341,140	3,348,429	100.0	100.0	28.5
1988	0	1,752,412	3,630,756	2,723,051	100.0	100.0	26.7
1987	0	772,549	3,413,812	2,243,078	100.0	100.0	43.1

Information prior to fiscal year 1987 is not available.

**MOSERS**  
**Total Benefits Payable June 30, 1991**  
**Tabulated by Attained Ages of Benefit Recipients**

Attained Ages	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Totals	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	0	\$ 0	0	\$ 0	10	\$ 16,080	10	\$ 16,080
20-24	0	0	0	0	2	6,276	2	6,276
25-29	0	0	0	0	2	4,428	2	4,428
30-34	0	0	1	1,152	4	12,336	5	13,488
35-39	0	0	4	7,776	11	53,112	15	60,888
40-44	0	0	9	17,292	22	92,184	31	109,476
45-49	0	0	16	45,228	35	144,396	51	189,624
50-54	0	0	29	89,652	48	225,780	77	315,432
55-59	298	2,225,232	53	178,644	100	403,224	451	2,807,100
60-64	1,339	9,742,116	91	265,368	120	391,896	1,550	10,399,380
65-69	2,952	17,497,860	0	0	150	533,304	3,102	18,031,164
70-74	2,558	13,721,748	0	0	144	427,668	2,702	14,149,416
75-79	1,896	9,136,980	0	0	117	317,736	2,013	9,454,716
80-84	1,188	5,168,916	0	0	71	200,484	1,259	5,369,400
85-89	486	2,194,368	0	0	25	50,100	511	2,244,468
90-94	161	657,828	0	0	3	2,352	164	660,180
95	10	38,136	0	0	0	0	10	38,136
96	15	57,324	0	0	0	0	15	57,324
97	12	36,636	0	0	0	0	12	36,636
98	5	16,536	0	0	0	0	5	16,536
99	2	5,520	0	0	0	0	2	5,520
100	4	10,584	0	0	0	0	4	10,584
101	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0
103	1	9,384	0	0	0	0	1	9,384
104	0	0	0	0	0	0	0	0
105	1	3,624	0	0	0	0	1	3,624
<b>Totals</b>	<b>10,928</b>	<b>\$ 60,522,792</b>	<b>203</b>	<b>\$ 605,112</b>	<b>864</b>	<b>\$ 2,881,356</b>	<b>11,995</b>	<b>\$ 64,009,260</b>

Average Age at Retirement    63.0 years  
Average Age Now                71.8 years

**ALJRS**  
**Total Benefits Payable June 30, 1991**  
**Tabulated by Attained Ages of Benefit Recipients**

Attained Ages	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Totals	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	0	\$ 0	0	\$ 0	0	\$ 0	0	\$ 0
20-24	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0
55-59	0	0	0	0	1	14,340	1	14,340
60-64	1	34,104	0	0	0	0	1	34,104
65-69	7	207,276	0	0	1	3,852	8	211,128
70-74	2	51,108	0	0	0	0	2	51,108
75-79	1	30,984	0	0	0	0	1	30,984
80-84	0	0	0	0	0	0	0	0
85-89	0	0	0	0	0	0	0	0
90-94	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0
96	0	0	0	0	0	0	0	0
97	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0
99	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0
101	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0
Totals	11	\$ 323,472	0	\$ 0	2	\$ 18,192	13	\$ 341,664

Average Age at Retirement    66.4 years  
Average Age Now                69.2 years

**MOSERS  
Actuarial Present Values**

June 30, 1991

<b>Actuarial Present Value, June 30</b>	<b>Actuarial Present Value</b>	<b>Portion Covered by Future Normal Cost Contributions</b>	<b>Actuarial Accrued Liabilities</b>
<b>Active Members</b>			
Service retirement benefits based on service rendered before and likely to be rendered after valuation date	\$ 1,942,931,113	\$ 731,723,670	\$ 1,211,207,443
Disability benefits likely to be paid to present active members who become totally and permanently disabled	59,939,569	30,036,592	29,902,977
Survivor benefits likely to be paid to widows and children of present active members who die before retiring	128,373,659	58,231,098	70,142,561
Separation benefits likely to be paid to present active members			
Refunds of member contributions	465,307		
Deferred benefits	196,552,002		
Total	197,017,309	110,425,473	86,591,836
Active Member Totals	\$ 2,328,261,650	\$ 930,416,833	1,397,844,817
<b>Members on Leave of Absence and LTD</b>			
Service retirement benefits based on service rendered before the valuation date			21,816,344
<b>Terminated Vested Members</b>			
Service retirement benefits based on service rendered before the valuation date			45,450,530
<b>Retired Lives</b>			587,489,069
Total Actuarial Accrued Liability			2,052,600,760
Assets Used in Valuation			1,793,370,043
Unfunded Actuarial Accrued Liability			\$ 259,230,717

**ALJRS**  
**Actuarial Present Values**

June 30, 1991

<b>Actuarial Present Value, June 30</b>	<b>Actuarial Present Value</b>	<b>Portion Covered by Future Normal Cost Contributions</b>	<b>Actuarial Accrued Liabilities</b>
<b>Active Members</b>			
Service retirement benefits based on service rendered before and likely to be rendered after valuation date	\$ 5,960,820	\$ 2,768,556	\$ 3,192,264
Disability benefits likely to be paid to present active members who become totally and permanently disabled	146,544	109,617	36,927
Survivor benefits likely to be paid to widows and children of present active members who die before retiring	477,620	328,743	148,877
Separation benefits likely to be paid to present active members	392,377	321,982	70,395
Active Member Totals	\$ 6,977,361	\$ 3,528,898	3,448,463
<b>Members on Leave of Absence and LTD</b>			
Service retirement benefits based on service rendered before the valuation date			0
<b>Terminated Vested Members</b>			
Service retirement benefits based on service rendered before the valuation date			167,373
<b>Retired Lives</b>			<u>3,587,023</u>
Total Actuarial Accrued Liability			7,202,859
Assets Used in Valuation			<u>4,707,938</u>
Unfunded Actuarial Accrued Liability			<u><u>\$ 2,494,921</u></u>

# Statistical Section



## Summary

### Plan Membership

Membership in the pension trusts administered by MOSERS grew slightly in the fiscal year ended June 30, 1991, as shown on the chart on page 65.

### Net Assets vs. Liabilities

The chart on page 66 graphically represents the funding progress of the pension plans for the nine years ended June 30, 1991. The accumulation of net assets is accomplished through inflows of employer contributions and investment income in excess outflows for benefits paid and administrative expenses. The spread between the total net assets and the liabilities represents the unfunded actuarial accrued liabilities.

The existence of unfunded actuarial accrued liabilities is not necessarily a bad indication, but the fluctuations are important and should be monitored and controlled.

### Asset Allocation

The establishment and monitoring of the asset allocation is one of the more important long-term management decisions facing the trustees of the pension plans. For the year ended June 30, 1991, the overall asset mix was targeted at a 46/54 percent equity/fixed income mix. Towards the end of the fiscal year the Board of Trustees adopted a targeted 55/45 percent equity/fixed income mix. Under this mix the projected long-term rate of return expected for the investments of the pension trusts is 8.5%, up from the 8.0% expected return for the previous mix.

### Equity Performance

The stock market, in general, for the year was a challenging one. Uncertainty seemed to be the driving force behind the market. Uncertainty over the United States economy, uncertainty over the events unfolding in eastern Europe and the Soviet Union, all compounded by the uncertainties generated by the Iraqi invasion of Kuwait. As shown by the chart on page 69, the Dow Jones Industrial Average dropped sharply upon the news of Iraq's invasion in August 1990, recovered after the defeat of the Iraqi forces in January 1991, but was still plagued by the uncertainties of the economies of the world for the balance of the year. The performance of our equity managers is shown on page 68 of this report.

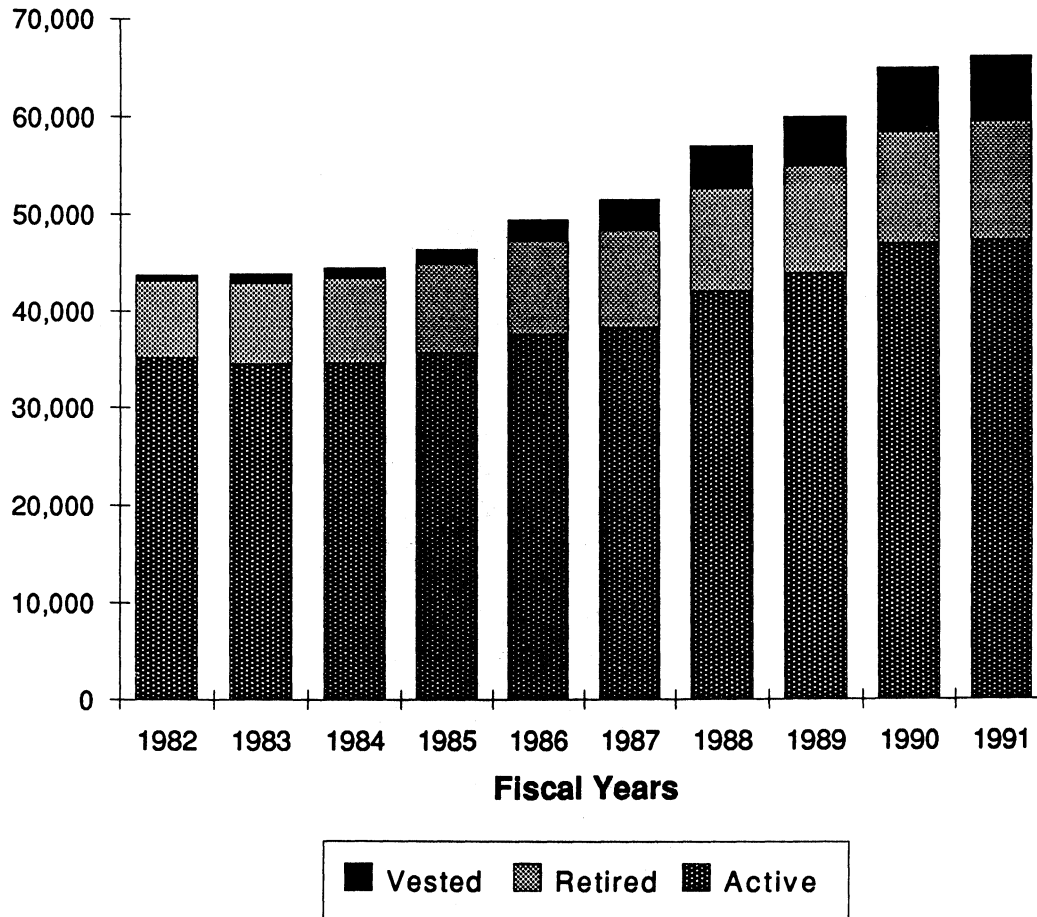
### Fixed Income Performance

While the fixed income portion of the portfolio was also impacted by the Iraqi invasion of Kuwait, the longer term bonds in the portfolio were enjoying a period of continued declining interest rates. However, towards the end of the year they too had been stagnated by the uncertainties of the Federal Reserve policy regarding interest rates. A chart representing the Lehman Brothers T-Bond index for the year is presented on page 70. The performance of our fixed income managers is also shown on page 68 of this report.

### Summary

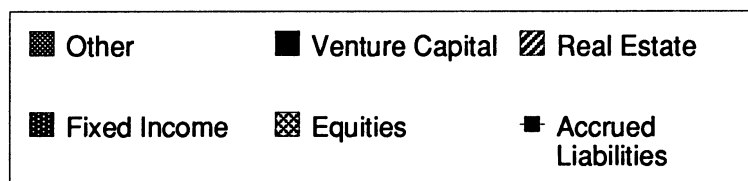
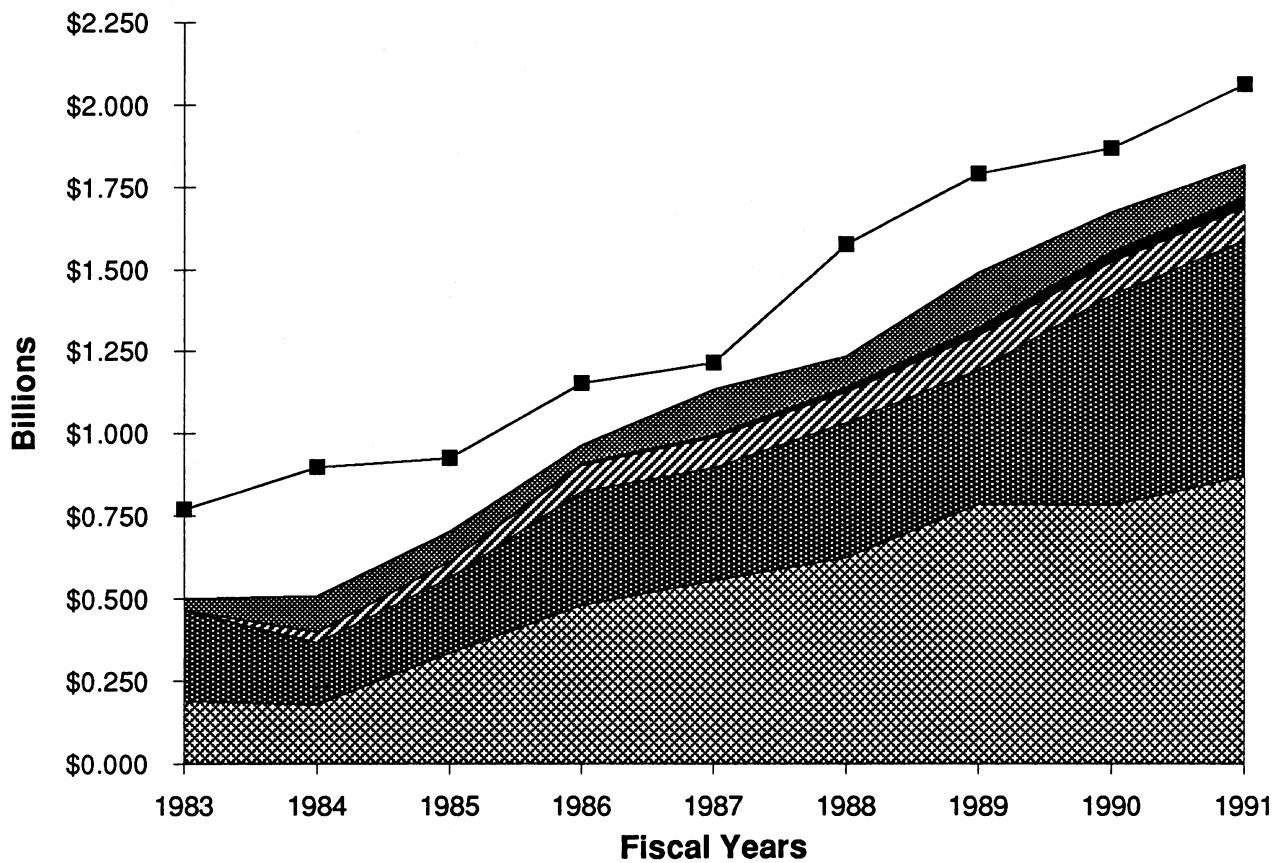
Both the equity and fixed income investments of the pension funds were impacted in the current year by world events and the United States economies. The effect of these extraordinary events was a lower than the assumed 8% rate of return to the funds in the current year which had the effect of pulling the three- and five-year return figures down also. However, given the lackluster market for the year ended June 30, 1991, the total fund return still exceeded the assumed rate of return for the five years ended June 30, 1991.

# **Missouri State Employees' Retirement System Membership in Retirement Plans Last Ten Fiscal Years**



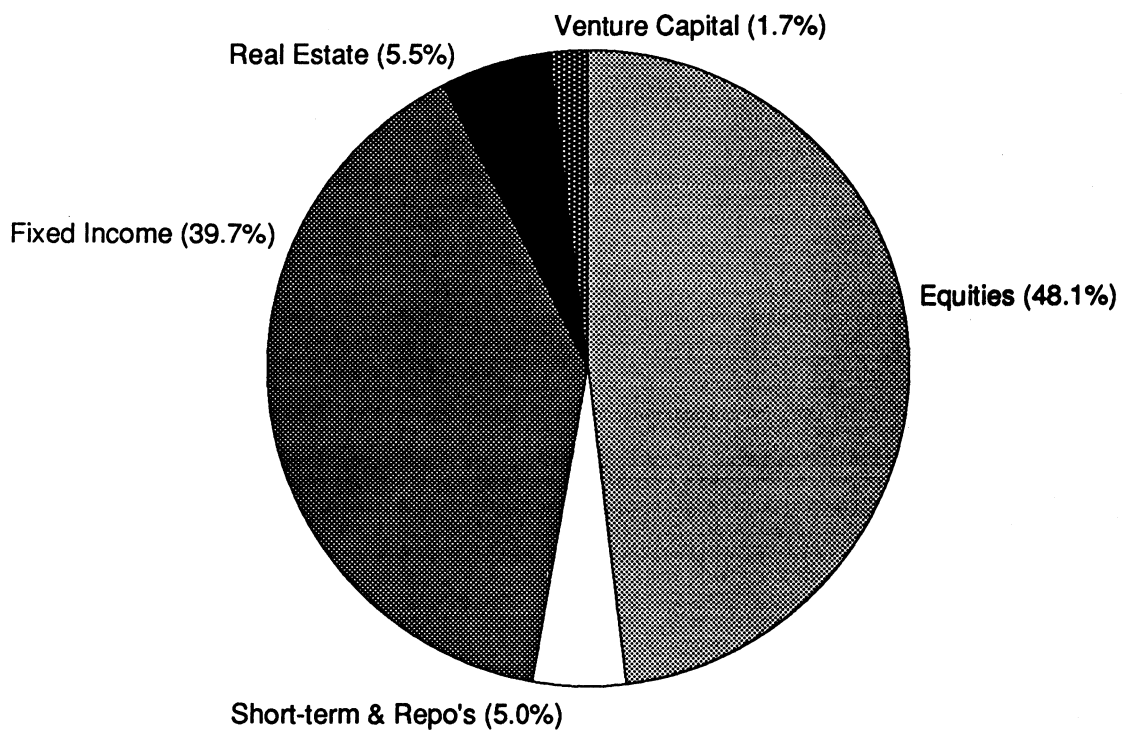
Fiscal Year	Active	Retired	Vested
1982	35,089	8,064	600
1983	34,468	8,436	994
1984	34,505	8,898	1,056
1985	35,575	9,254	1,442
1986	37,552	9,653	2,131
1987	38,174	10,090	3,200
1988	41,944	10,612	4,356
1989	43,787	11,090	4,997
1990	46,834	11,495	6,544
1991	47,105	12,307	6,610

# Missouri State Employees' Retirement System Pension Trust Funds Net Assets vs. Liabilities Nine Years Ended June 30, 1991



## Missouri State Employees' Retirement System Pension Funds Investment Diversification

June 30, 1991

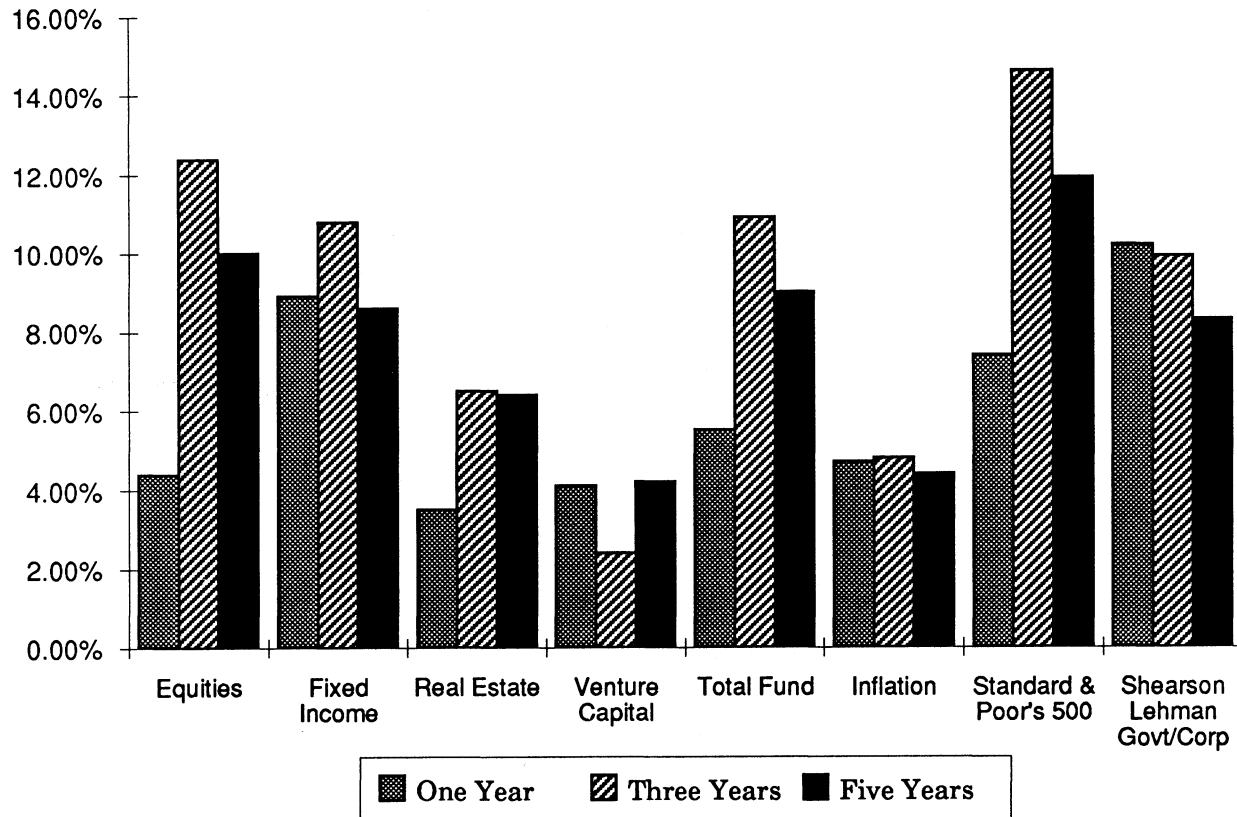


	Market Values Millions
Equities	869.63
Fixed Income	718.15
Real Estate	100.30
Venture Capital	31.13
Short-Term and Repo's	90.06

NOTE: Short-Term and Repo's as reported elsewhere in this report include \$219.16 million of invested collateral from the securities lending program. These have been excluded from this chart.

## Missouri State Employees' Retirement System Pension Funds Investment Performance

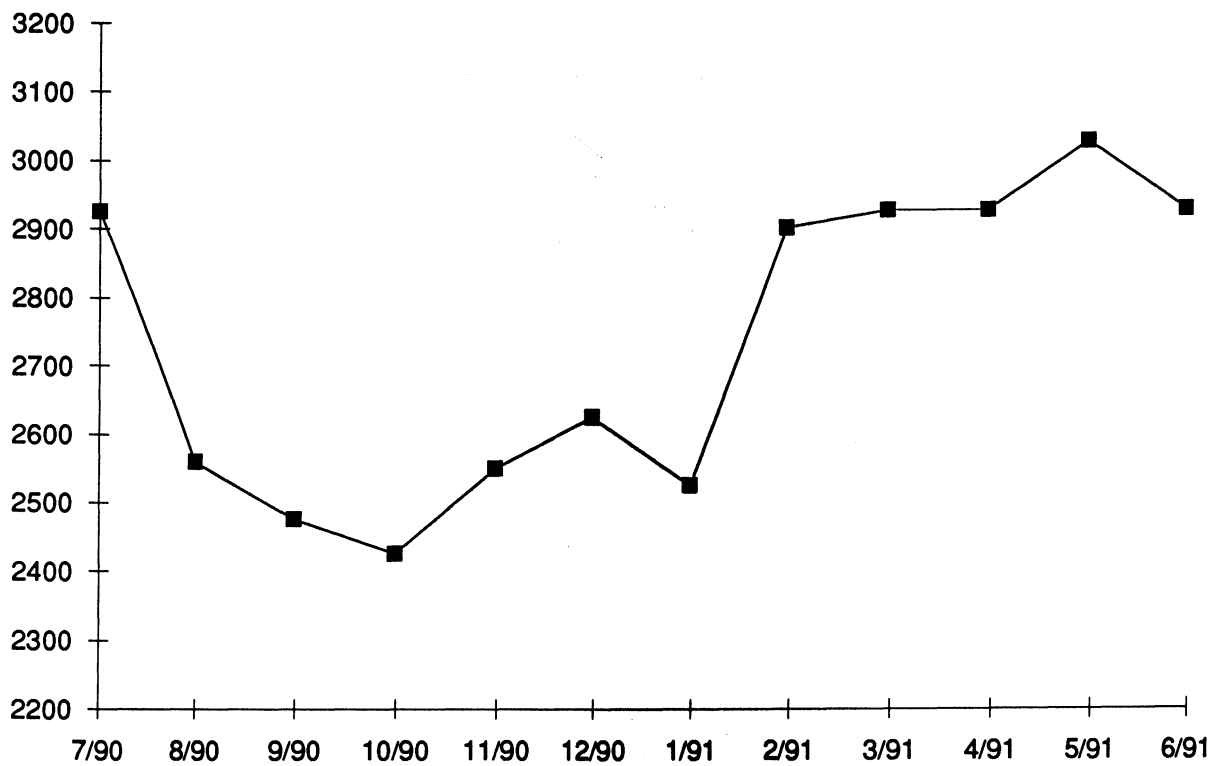
Periods Ended June 30, 1991



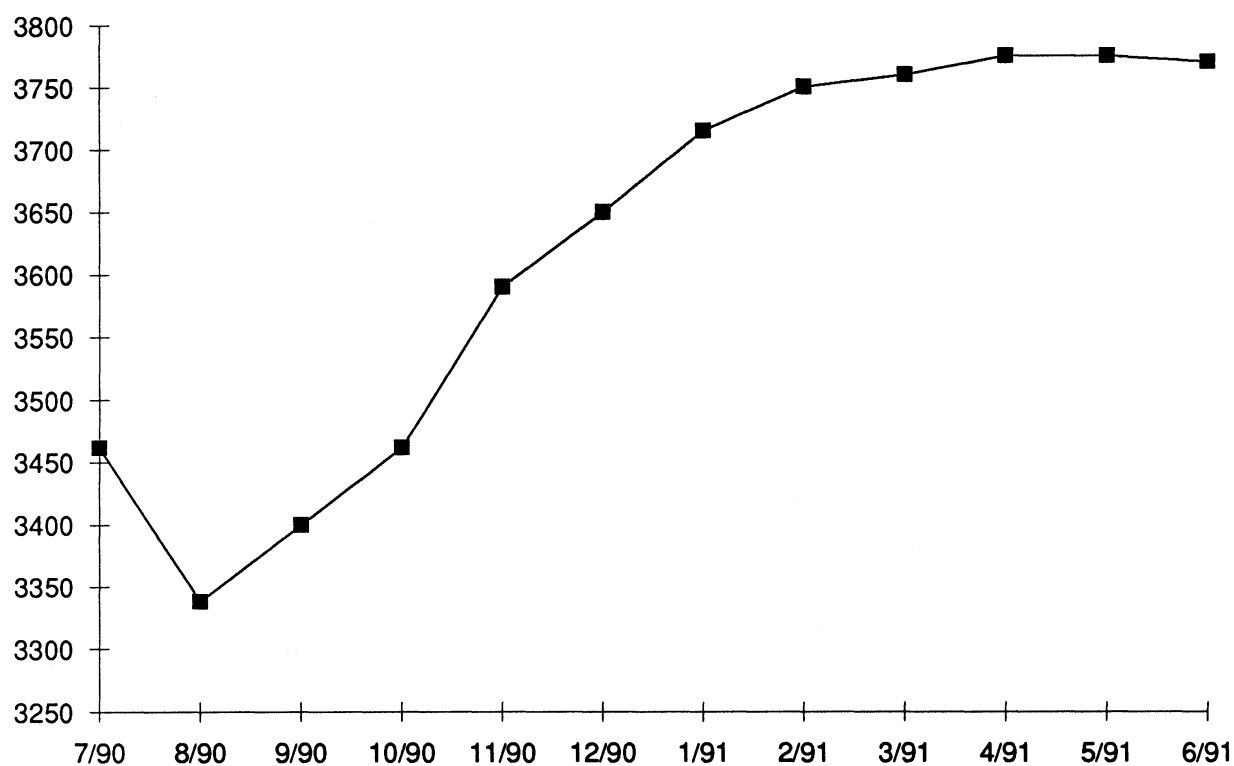
	One Year	Three Years	Five Years
Equities	4.4%	12.4%	10.0%
Fixed Income	8.9	10.8	8.6
Real Estate	3.5	6.5	6.4
Venture Capital	4.1	2.4	4.2
Total Fund	5.5	10.9	9.0
Inflation	4.7	4.8	4.4
Standard & Poor's 500	7.4	14.6	11.9
Shearson Lehman Govt/Corp	10.2	9.9	8.3

Returns provided by the Investment Consultants to MOSERS.

## Dow Jones Industrial Average



### Lehman Brothers T-Bond Index



# Benefit Expenses by Type Last Ten Fiscal Years

Ten Years Ended June 30, 1991

	<u>FY91</u>	<u>FY 90</u>	<u>FY 89</u>	<u>FY 88</u>	<u>FY 87</u>
Retirement	\$ 56,451,361	\$ 50,622,879	\$ 44,961,595	\$ 30,597,097	\$ 20,206,526
Survivor	2,566,480	2,178,282	1,653,244	1,365,209	1,097,245
Disability	659,961	996,712	1,210,440	1,767,075	1,333,313
Nonfunded	0	0	0	4,703,479	11,160,433
Judges	6,572,690	5,838,700	5,142,127	4,380,973	3,572,635
Legislators	1,119,047	922,435	714,248	617,267	505,894
Admin. Law Judges	317,374	191,534	163,327	104,757	52,983

	<u>FY 86</u>	<u>FY 85</u>	<u>FY 84</u>	<u>FY 83</u>	<u>FY 82</u>
Retirement	\$ 17,555,999	\$ 15,271,986	\$ 13,416,391	\$ 11,488,165	\$ 9,589,627
Survivor	921,403	770,414	659,585	539,286	446,890
Disability	1,334,181	1,196,489	1,054,161	961,969	853,553
Nonfunded	7,706,443	6,852,613	5,632,780	5,267,274	4,877,446
Judges	2,969,364	2,728,581	2,507,052	2,343,787	2,170,611
Legislators	340,393	264,663	180,859	135,035	100,458
Admin. Law Judges	11,412	0	0	0	0



**Missouri State Employees' Retirement System**  
**Benefits Payable June 30, 1991**  
**Tabulated by Option and Type of Benefit**

<b>Type of Benefit</b>	<b>Number</b>	<b>Annual Funded Benefits</b>	<b>Average Annual Benefit</b>
Service Retirement			
Normal Annuity	9,238	\$ 46,669,860	\$ 5,052
50% Joint and Survivor	538	5,698,872	10,593
75% Joint and Survivor	29	205,512	7,087
100% Joint and Survivor	961	6,999,732	7,284
5 Year Certain and Life	77	469,452	6,097
10 Year Certain and Life	85	479,364	5,640
Survivor Beneficiary	389	1,465,884	3,768
Total	11,317	61,988,676	5,477
Disability Retirement	203	605,112	2,981
Death-in-Service	475	1,415,472	2,980
Grand Totals	11,995	\$ 64,009,260	\$ 5,336

**Average Monthly Benefit Amounts**

Five Years Ended June 30, 1991

	<b><u>FY 91</u></b>	<b><u>FY 90</u></b>	<b><u>FY 89</u></b>	<b><u>FY 88</u></b>	<b><u>FY 87</u></b>
<b>REGULAR</b>					
Member	\$ 455	\$ 426	\$ 384	\$ 331	\$ 314
Survivor	274	251	205	194	181
Disability	249	275	265	238	205
<b>JUDGES</b>					
Member	2,672	2,575	2,275	2,107	1,845
Survivor	835	781	722	690	643
Disability	0	2,710	2,557	2,549	0
<b>LEGISLATORS</b>					
Member	1,026	964	878	850	883
Survivor	428	439	319	299	234
<b>ADMIN. LAW JUDGES</b>					
Member	2,431	2,085	2,094	2,049	1,867
Survivor	758	0	0	0	0



